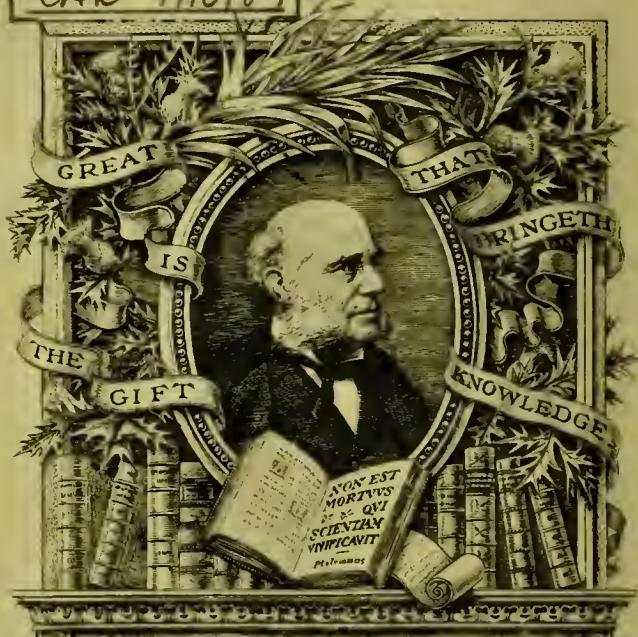




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# AN ESSAY

ON THE

## CERTAINTY OF MEDICINE,

BY

P. J. G. CABANIS,

MEMBER OF THE SENAT. AND OF THE NATIONAL INSTITUTE,  
COMMANDER OF THE LEGION OF HONOUR, PROFESSOR IN THE  
SCHOOL OF MEDICINE OF PARIS, MEMBER OF THE PHILOSO-  
PHICAL SOCIETY OF PHILADELPHIA, &c. &c.

Νῦν δ' αὐτὴ ἡ ἀνάγκη ἵπτρικὴν ἐποίησε ζητεῖσθαι τε καὶ εὑρεθῆναι  
ἀνθρώποισιν.  
Ιπποκρατ. περ. Αρχ. ἵπτρ.

TRANSLATED FROM THE FRENCH

BY

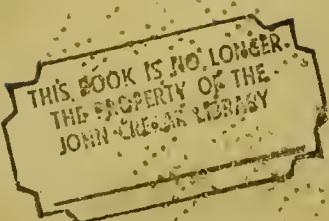
R. LA ROCHE, M. D.

PHILADELPHIA:

PUBLISHED BY ROBERT DESILVER,  
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1823.

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81

TO SAMUEL BROWN, M. D.  
*PROFESSOR OF THE THEORY*  
AND  
PRACTICE OF MEDICINE  
*IN THE UNIVERSITY OF TRANSYLVANIA,*  
THE  
FOLLOWING TRANSLATION  
IS RESPECTFULLY INSCRIBED,  
AS A TESTIMONY  
*OF THE SINCERE ESTEEM*  
IN WHICH HE IS HELD  
BY  
THE TRANSLATOR.

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## PREFACE OF THE TRANSLATOR.

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Que de jeunes médecins eussent mieux servi leur art en s'occupant à traduire, au lieu de risquer leur gloire par des productions irréfléchies et prematurées!

IMPRESSED with the correctness of the above remarks, and with the view of meeting the desires of some members of the profession—fulfilling the request of one of the most distinguished professors of our university, and enriching the medical literature of this country, with an useful and excellent work, I have occupied my leisure moments in the translation of the following essay of Cabanis, on the certainty of our art, which I now present to the medical public, in the sincere hope that it will be found deserving of its approbation.

I have endeavoured to convey the author's meaning, in as simple a style and as literally as the nature of the work, or its peculiar mode of composition would admit, and have not aimed at elegance of diction, from a firm conviction that in a performance of this kind, it is impossible to attain this degree of perfection, without a manifest sacrifice, in many instances, of the real sense of the original text.

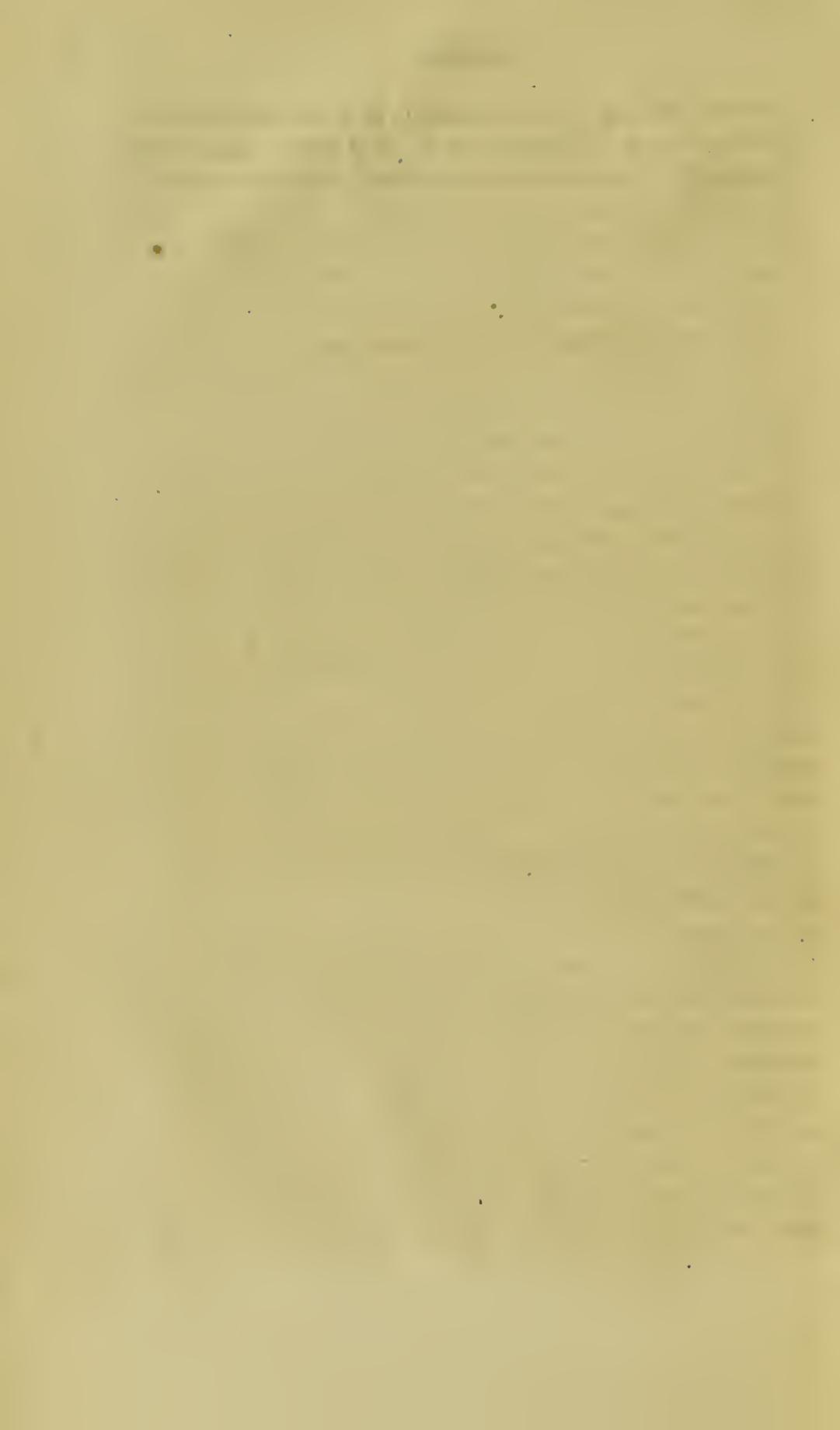
Distinct, however, from the reasons I have alleged, as leading me to the selection of the following essay, I felt more

particularly disposed to make it, by noticing the injustice done Cabanis, even in our own country, by one of the brightest ornaments of American medicine. Whoever will peruse with attention the introductory lecture of the late Dr. Miller of New York, on the certainty of medicine, and compare it with this work, will readily discover, that, although adopting a somewhat different arrangement, Dr. Miller has reproduced the same materials, the same arguments, and in many instances, the very words used by Cabanis.

It will perhaps be contended in extenuation of this seeming want of honesty in Dr. Miller, that the lecture was not intended by him for publication, and only printed in his posthumous works under the superintendence of his brother, who being a member of a different profession, was not competent to judge, whether or not the memoirs he was issuing to the world, were original productions; but it must constantly be borne in mind, that it was published, as it had been delivered, and that we are consequently led to believe that in translating, and arranging it, at the same time neglecting to refer it to its legitimate author, or even to make mention of his name, Dr. Miller did so with an evident desire of passing it on his audience, as a performance of his own.

It is not without some feeling of regret, that I have found myself under the necessity of making these remarks, which by many may be regarded as derogatory to the memory of Dr. Miller; but convinced, as I am, that the too frequent repetition of plagiarism, lays a broad foundation for the exercise of sarcasms, daily and unreservedly heaped on our profession, I have thought that this little act of unfair compilation, should be exposed to public view, and that in justice to the memory of Cabanis, it was a duty incumbent on me, as his translator, to claim in his favour any eulogium Dr. Miller may have received for the excellency of this production. Notwithstanding these animadversions, however, I am very

far from wishing to be understood, as undervaluing the reputation which Dr. Miller has so very justly merited and enjoyed, for his eminent talents, ardent zeal, and noted humanity.



## LIFE OF CABANIS.

VIEWED in every respect, Cabanis commands our admiration, and may with propriety be offered as a suitable model to the present and future generations. As a man, gifted with many of the most endearing qualities of heart, and a high sense of probity, honour and virtue, he is justly entitled to our esteem—as a philosopher, he occupies a pre-eminent rank among those, who in the present age have distinguished themselves in that department of knowledge—as a cultivator of liberal science, possessing an extensive erudition, and being moreover an elegant writer, he must be regarded as holding an elevated station in the republic of letters; and if as a practical physician, we cannot place him among the small number of those who have contributed to the perfection of the art, we are led to attribute this to the nature of those circumstances, under which he was placed, and to his greater fondness for the speculative, than for the practical department of medicine, rather than to a defect in his capacity for strict observation. In the following sketch of his life, therefore, taken almost literally from his eulogium by Richerand, and his biography written by Reydellet, and contained in the third volume of the Biographie Medicale, we shall not only view him, as a physician, but as a philosopher and a man of letters.

Peter John George Cabanis, member of the senate and of the national institute, commander of the legion of honour, professor in the medical school of Paris, member of the philosophical society of Philadelphia, and other learned societies, was born at Conat in France, on the 5th of June, 1757. In the early periods of his life, we discover nothing deserving of particular attention. Placed, agreeably to a then prevailing custom, at the age of six or seven years, under the immediate direction of an ecclesiastic, he gave proofs if not of talent, at least of very good dispositions, which united as they were to a methodical mind, unwearyed assiduity and perseverance in all his undertakings, led many to suppose that, if well guided, he would reap success from his studies. At the age of ten years, he was sent to the college of Brives, and there entrusted to the care of a teacher, who combining learning with great gentleness of manners, succeeded very soon in gaining his unlimited confidence. Cabanis prosecuted his studies with considerable credit, and from that period began to evince a taste for literature and poetry, which he retained to the last moments of his existence. Already he had entered the class of Rhetoric, and from all appearances it seemed evident that he would derive from a study of that science, new pleasure, and obtain additional successes, when unhappily an event, apparently of trifling moment, occasioned disturbance in so promising a beginning, and gave rise to the development of that unbending disposition he afterwards betrayed, and occasioned him even in the early period of his life so many moments of trouble and anxiety. Unjustly, or too severely punished by one of his preceptors, he felt so great a degree of resentment, that so far from mending his conduct, he purposely neglected all his duties—endeavoured to exasperate his superiors against him, and finally succeeded in being turned out of college and sent home to his father. But even here happiness and tranquillity did not await

him. Displeased at so reprehensible a behaviour, his father thought that in order to restrain the haughtiness of his character, it was indispensably necessary to adopt measures of severity against him, and in consequence treated him with more harshness than had ever been done by his teachers themselves. Cabanis, revolting at what he regarded as unmerited treatment, abandoned his studies, and it is more than probable that his talents and good disposition would have been lost forever, had not his parents discovered that from a course such as they had pursued, none but sad results could be anticipated, and felt the necessity of adopting towards him an opposite plan of treatment. He was consequently conducted to Paris by his father, and after being recommended to the attention of some powerful friends, among whom must be enumerated Turgot, then minister of the Finances, he was left at the age of fourteen, alone amidst the bustle and dissipation of that immense capital. From this period we must date the first successes of Cabanis. Emancipated from a degree of oppression he had borne with the utmost impatience, abandoned to himself and to all his tastes and propensities, and enjoying now the liberty so precious to youth, and which in him constituted an imperious want; he felt within himself the revival of his former passion for study—engaged in its pursuit with more than his former assiduity, and from that moment, those germs were developed, which a defective plan of education had hitherto served to hold in concealment.

Devoting his attention chiefly to the study of the science of logic and natural philosophy, he derived the greatest pleasure from a profound meditation of the essays of the celebrated Locke, and attended with diligence the lectures of Brissot, successor of Nollet, who at the time enjoyed a considerable reputation. Nor did he entirely neglect the pursuit of light literature, but on the contrary occupied himself, from time to time in revising the various branches of

his former studies, in which he did not think himself sufficiently qualified.

Cabanis had already lived two years in Paris, content amid the most arduous scientific labours, and a few studious friends, when by an order from his father, he was summoned home. Not long previous to this, he had been offered a situation as secretary to the prince Massalky, bishop of Wilna, about accepting which he still hesitated, when the receipt of his father's letter, induced him instantly to decide. To the distressing thought of burying himself in a province, without hope of being able to pursue his favorite avocations, or even retain the knowledge he had already acquired, he unhesitatingly preferred the hazards of a long and perilous journey, by which his studies would be but momentarily suspended, and which, from the existing political situation of that unhappy country, presented itself as a subject well calculated to excite his curiosity, and nourish his ardent imagination. This journey he undertook in the year 1773, at the period of the famous diet, where the expediency of the barbarous spoliation and dismemberment of Poland was first put in agitation. After remaining two years in Poland, Cabanis returned to Paris, entertaining, as he has himself since confessed, a contempt for the human species, the natural result of the many intrigues and unprecedented crimes, which took place on that memorable occasion, and which were well calculated to exercise a powerful and fatal impression on his youthful and sensible mind.

Soon after his arrival in Paris, he was presented to Turgot, and being favoured with the direct patronage of this minister, he naturally anticipated considerable success, in the career he had chosen, when the sudden removal of his protector from office, which soon followed, blasted all his fondest hopes, and reduced him to a state of real embarrassment. Now commenced his truly literary life. Weary of the obscurity

in which he had hitherto remained—anxious to attract public notice, and fully aware of the necessity of discovering some means well calculated to attain this object, Cabanis without much hesitation, made choice of that which his enthusiasm for poetry presented, and in this, was not a little encouraged by a favourable opportunity which, about that time, was presented, as well by the successes with which his friend had been crowned. The academy of Paris, had lately proposed as a prize subject, the translation in French verse of a part of Homer. Cabanis, determined as he was, to become a poet, enlisted his name among those of the many candidates; and doing even more than was required, undertook the entire translation of the Iliad. But, alas, he was very far from being satisfied with the results of this dangerous enterprize; for notwithstanding the great exertions of some friends, his work did not obtain the smallest attention, and his vanity received, on this occasion, a shock, which though diminished, was not removed entirely by the suffrages of a few and learned votaries of the Muses.

But with these, and with his successes in society, Cabanis could not rest satisfied—the natural melancholy of his mind had received, from this disappointment some degree of augmentation, and he now felt that an existence so void of interest, could not well suit his disposition, and that, objects of a more elevated character were the most proper for the exercise of his meditations. Tormented, therefore, with the continued recurrence of such ideas, and in order to meet the reiterated desires of his family, he decided in making choice of a profession, and unhesitatingly gave the preference to medicine. His imagination was excited by the number and diversity of those subordinate branches which by their union, constitute the science of medicine—in their study he discovered ample nourishment for his active mind, and his immoderate love of learning, and finally the practice of that profession appeared to him, to offer a salutary exercise; a ne-

cessary compensation for the inconvenience of literary pursuits and the most proper remedy against the many indispositions arising from that source. It is moreover probable that he was induced to make choice of medicine from entertaining the idea, which he so frequently alludes to in his writings, that the study of that science, owing to the independency of its character, serves to elevate the soul, enlarge the domain of the intellectual faculties, and propagate and keep up a desire and taste for liberty, by destroying the frightful mass of prejudice, the offspring of ignorance, and the retinue of despotism, so faithfully kept up by powerful personages under the mask of religion, in order to maintain the people they enslave in blind and passive obedience. Be this as it may, Cabanis engaged in his new career, with the same ardour he had displayed in all his former undertakings. Hippocrates excited in him a degree of enthusiasm equalled only by that he received from the study of Homer. He admired him both as an historian and writer, for, familiarly versed in a knowledge of the Greek language, he lost none of its beauties, too often disfigured by unfaithful translators. He consequently derived the first elements of the art from the antique and pure source of Greek medicine. His medical education offers some analogy with that of the ancient Asclepiadæ, since, like them, he was initiated to a knowledge of the most sublime mysteries of our art. His first steps in the arduous path of practice, were guided by Dubreuil, a very celebrated practitioner of that period, for whose memory he always retained a high sense of respect and veneration. During six years Cabanis received his clinical instructions, profited by his lessons, and solicited his advice; in a word, endeavoured by all possible means to become a learned physician. So considerable indeed was the zeal he displayed on this occasion, that his health seemed to suffer from it, and he was, in consequence, obliged to seek the

benefits of the country air, though not until he had acquired a considerable share of medical knowledge, for the greater part of which he was under obligations to his beloved master.

Compelled, in order to prosecute his studies, to remain in the vicinity of Paris, Cabanis made choice of Auteuil as a residence, where he was presented by his former protector Turgot, to Mad. Helvetius, widow of the celebrated philosopher of that name. The affections of that illustrious lady he soon so engaged, as to become an inmate of her house, and it is more than probable, that this intimacy was perhaps the first among a number of those circumstances that have exercised some influence over his political career, for it is there he became acquainted with many of the conspicuous personages of this interesting period, with many of whom, owing to an identity of opinion and sentiments, he soon became united in the bonds of friendship. It was there, and at Turgot's, that he saw D'Holback, Champfort, Morellet, Thomas, Condillac, Diderot, D'Alembert, and was presented to Voltaire, when that extraordinary man returned to Paris. There likewise he associated familiarly with Mr. Thomas Jefferson, though more particularly with our celebrated Franklin, at whose house at Passy, he frequently dined in company with Mad. Helvetius, and with whom he afterwards continued a correspondence.

In the year 1784, Cabanis graduated as doctor of medicine, and from that period until that of the French revolution, he devoted his attention exclusively to the practice of his profession. By his talents and the character of those personages with whom he had formed a close intimacy, he was called upon to act an important part in the critical events of his country, but faithful to medicine, he resisted the allurements of ambition, accepting only the situation of administrator of the hospitals of Paris, as best suited to his talents and daily avocations. Already in 1789, he had publish-

ed some observations on these useful institutions; a work abounding in views on the mode of their government, new and philanthropic, which have been since happily realized.

His intimacy with the celebrated Mirabeau, to whom, in conjunction with several other men of letters, he devoted his pen and talents, is sufficiently known, and it is now well ascertained that he is the author of the work on public education, found among the papers of the former, and which he himself afterwards published in 1791. Pushing his admiration of that extraordinary man, even to enthusiasm, Cabanis took pleasure in relating the occasion on which they had first met. "It was in the chamber of the National assembly on the 15th of July, 1789, the next day after the taking of the Bastille. The greater number of the members, says Cabanis, were ignorant, or at least imperfectly acquainted with what had happened in Paris the day preceding. I had several circumstances to relate to them. Mirabeau, whilst I was engaged conversing with five or six of his colleagues, followed me with his eyes; he inquired my name of Garat the younger, and of Volney, both my intimate friends, and as he had seen it attached to some of the literary productions of my early youth, he accosted me with that interest he never failed to show to all persons whom he thought possessed of talents, or even only of erudition. From this moment, I date the commencement of our acquaintance, and although for a long time afterwards I seldom met him, I never lost sight of him. The friendly advances he had made me, have often recurred to my memory, and on his part, he several times told me, that this interview had left in him some recollections, and that he regarded our friendship as having commenced from that period." As a proof of this remarkable intimacy which existed between these men, and the attachment of Mirabeau for Cabanis, it need only be mentioned, that Mirabeau could

not live long separated from his friend, and that when attacked with that disease which deprived France, at one of the most critical periods of the revolution, of his services, he praeemptorily refused to have any other physician than him. "No," he answered to the entreaties of Cabanis, "I shall see nobody. You have sustained all the inconveniences of my disease: If I regain health, and am saved from death, you shall have all the credit. I am determined that you shall enjoy all the glory of my cure."

After devoting to Mirabeau all the attention which his disease required, and fulfilling near him all the duties of an affectionate friend, Cabanis anxious to defend, and feeling irritated at all that tended to tarnish the memory of one he had so sincerely loved, and for whom he had entertained so much veneration, undertook the refutation of all the various and malicious accusations that had been brought against him, and in the year 1791, published a history of his disease, and last moments.

Cabanis had become intimately acquainted with the celebrated Condorcet at Franklin's. To him it was, this victim of the French revolutionary troubles recommended his wife and son. Cabanis gave him the last consolations, collected his last writings, and shortly after, married his sister in law, Charlotte Grouchy, sister of the general of that name, (who some few years ago, visited this country,) and of Sophie Grouchy, widow of Condorcet. Endowed with an ardent imagination, and with a soul irresistibly directed to the performance of good actions, Cabanis laboured with all the means in his power to extend the limits of public liberty: impelled by the desire of being useful, he partook of an error alike shared by many honest, enlightened, but prejudiced men, and caressed a sanguinary idol, since discovered to be chimerical, in the extreme—the republic, known only when it was viewed as offering prospect of happiness to France, and not when he witnessed it sullied with the many crimes

and atrocities which have spread so much gloom over that period of French history.

Cabanis was enjoying the pleasures of a retired and tranquil life, when, after the reign of terror, in the third year of the republic, and at the moment when the organization of the central schools, became the subject of particular attention, he was appointed professor of Hygiene; the succeeding year member of the national institute; soon after, professor of clinical medicine in the school of Paris, and representative of the people in the council of the five hundred. The duties of this latter station he continued to fulfil until soon after the return of Bonaparte from Egypt, the revolution of the eighteenth Brumaire occasioned in the political situation of France that wonderful change, which gradually led Napoleon to the unoccupied throne of the Bourbons. In the events of this period, Cabanis took an active part. Together with Lucien Bonaparte, Boulay, Emile Gaudain, Chasal, he was one of the leading men in the council. He greatly contributed to the dissolution of the directory, assisted the change he advocated, with all the means which his talents and personal reputation could afford, and soon published a work, in which he attempted to demonstrate the advantages of the new, over the preceding form of government. In recompense for this, and for his great exertions, he was soon honoured with a seat in the senate, where he became the associate of the most distinguished characters of which France could then boast.

From this moment commenced the publication of his principal work. Already, however, in 1783, he had composed his oath of a physician, which is a free translation of the oath found in the writings of Hippocrates. With this he took an eternal leave of Poetry, and in it, manifested all the principles he afterwards developed at the approach of, and during the progress of the revolution. He had also presented

the public in 1791, with his *Essay on the Certainty of Medicine*, a translation of which we here present.

Without fear of contradiction, it may be affirmed that it is the best if not the only work we possess on the subject, and one that ought to be in the possession of every cultivator of medicine, and to a careful study and meditation of which every physician should devote a considerable portion of his attention. Very many of the arguments the author has adduced in support of his opinion, and in vindication of the just claims of medicine, to the rank of a science possessed of certainty, are, I think, satisfactory, and in more instances than one unanswerable by the most sceptical and violent of its enemies. Nevertheless although prepared to maintain the truth of this assertion, neither the humble office of translator, nor my admiration for the talents of Cabanis, have rendered me blind to some defects this work presents, or prevented me from acknowledging the truth of an opinion, advanced not long since, that in some of the positions he has assumed, the author has failed to establish the certainty of medicine on the very solid foundation, upon which it could be demonstrated to rest. The reason of this is obvious, and must be sought for in the nature of the medical theories of the times. Writing, as he did, at a period when the science of medicine was, more particularly in the country he inhabited, founded exclusively on the doctrines of the Hippocratic school, when nature was regarded as the first and best of physicians; when it was considered most philosophical to remain an idol spectator of her efforts, and contrary to all the principles of true science, to disturb the regular march of a disease, or effect any change in the order of the critical days; Cabanis could only ground the greater number of his arguments on the prevailing views of pathology and therapeutics. The true principle of Physiology, as subsequently taught by the immortal author of the *Anatomy Generale*, had not yet served to occasion, in medical opinions,

that remarkable revolution which we have witnessed in later years. Neglecting the study of the figures, or organs, and of the many modifications of irritation and inflammation as they took their seat in either of the different parts, entering into the composition of our body, omitting to refer in all cases, symptoms to diseased organs, and regarding morbid derangements in the light of so many independent and abstract beings, possessing each its peculiar characteristics, and governed by its own particular laws, the cultivators of practical medicine could not establish with solidity the certainty of an art, the doctrines of which were still involved in the obscurity of metaphysical speculations. Independently of this, and as a natural result of these erroneous pathological hypotheses, a knowledge of the true nature and character of nearly the whole tribe of chronic maladies, was far from having attained that degree of precision to which it has since been carried; consequently their treatment could not be undertaken on any principles of sure application; and the unfortunate patient was thereby doomed to submit for relief to the hazard and dangers of philosophical empiricism.

Assuredly, under circumstance such as we have here enumerated, to demonstrate the medical art to be possessed of absolute certainty, was an enterprize not a little difficult of execution, and one well calculated to baffle in some respects, the efforts of the most vigorous and cultivated mind.

But if from the innumerable and insurmountable obstacles which he thus encountered in the execution of the task he had imposed upon himself, Cabanis did not succeed in fully attaining the object he had intended, still it will be conceded by all unprejudiced readers, that he has evinced in treating the subject a degree of zeal, talent and philanthropy which reflects on him an infinite credit, and entitles him to our warmest admiration. Had it pleased Providence to have lengthened his mortal career, and had he devoted his attention to those studies that are necessary, in order to form

a just estimate of the soundness of the prevailing pathological doctrines, he would, we entertain no doubt, have acknowledged the correctness of our remarks, and confessed that medicine is now more certain in its application, more extensive in its benefits to mankind, and removed farther beyond the reach of the sophistical arguments of false philosophy, or of the sneers and sarcasms of the wittling, than at the period at which he wrote. To this conclusion I am the more disposed to arrive, when I reflect, that unable as he was to witness himself the rapid strides towards perfection, which, within the last few years, medicine has evidently made, and foreseeing the probable issue of future investigations by virtue only of his instinctive genius, this great philosopher was able to prophecy, as it were, the improvements the science would ultimately undergo.

In 1802, Cabanis published his celebrated work entitled *Rapports du Physique et du Moral de l'homme*, the basis of which he had already made known in several memoirs read before the national institute of France. "Few men," says Richerand, "would have been able to collect such a large number of observations—to have made a better choice of them—classed them more methodically—deduced from them general truths, and principles which are their immediate and natural consequences; joined to them more new and important views,—expressed them in a manner more dignified and suited to the importance of the subject; to have employed with greater advantage the light derived from the ideaological, physiological, and physical sciences; and finally have separated with more sagacity objects of mere speculation, from real and positive knowledge."

In this work, Cabanis, in attempting to prove that whatever is moral and intellectual in man is the result of organic structure, has manifestly betrayed a great tendency towards the support of the doctrine of materialism. On this occasion he has been judged with considerable severity by

those philosophers who advocate the contrary opinion, but more especially, and as might be anticipated, by divines and other zealous defenders of the Christian faith, who, as he has himself noticed in the preface to the second edition, "were apprehensive lest this work should have for object, the overthrow of certain doctrines, and the re-establishment of others relative to the nature of first causes." It is my firm conviction, however, that the strictures on the opinions of this celebrated philosopher, as preferred by his opponents, have been much too severe, and made without sufficient candour, and careful examination. By those accustomed to metaphysical disquisitions, it cannot be denied that the subject involved as it is in the most impenetrable obscurity, is difficult in the extreme—one in the investigation of which the imagination is presented with a wide field for the exercise of speculation, and towards the elucidation of which, after the most indefatigable labours, and profound meditations, we are forced to confess we have made little or no progress. The mind of Cabanis, therefore, endowed, as we have already seen, with such activity, could not well avoid encroaching on the domain of speculation; and drawn, in a great measure, by the current of received opinion, refuse to betray some partiality in favour of the doctrines of materialism. But granting this, it will at least be conceded, that in his hands it has not been carried to as unlimited an extent, as in those of some of his predecessors, and contemporaries, and subsequently by Blumenbach, Cuvier and Lawrence, and that from innumerable passages in his writings, we are warranted in concluding that in him this doctrine was unconnected with the principles of atheism so frequently encountered in its most zealous defenders.

In the course of the year 1804, Cabanis published an abridged and philosophical history of medicine, under the title of *Coup d'œil sur les revolutions et sur la reforme de la medecine*. This work is replete with new views which might

lead to extensive developments, and be productive of considerable benefit. He has displayed in it, evidence of an immense erudition, and we are forced to regret, that from the feebleness of his health, and his death, which happened but too soon, he was not permitted to execute the plan he had formed, and of which the present work is only a sketch; that of writing a full and complete history of medicine, and of other sciences; in order to point out the aid it has received from them, and which it is capable of affording them.

The very great activity he had evinced in his private occupations, and amid the bustle and agitation of public affairs, soon began to occasion a material alteration in the condition of his health. In the spring of 1807, he sustained an attack of apoplexy, which though unattended with unpleasant consequences, served to warn him of the necessity of seeking repose, and of retiring from business. He, in consequence, left Auteuil and established his residence at his father-in-law's, M. De Grouchy, who lived near the small town of Melun, about twelve leagues from Paris. There Cabanis occupied himself, during the ensuing fine season in reading once more those poetical works he had so much admired in his early days, and in visiting and affording medical assistance to the neighbouring poor. He spent the winter at Ruelle, near Melun, and from this time, slight, but repeated attacks, announced his approaching death, of which he conversed seriously but without betraying the slightest evidence of fear. He was fond of repeating that sentence of Hoffman, that the nervous apoplexy is the recompense allowed by nature, to those who have engaged in long mental occupations. Finally, on the 5th of May, 1808, after a promenade with his wife, he retired to rest, and about one o'clock, was carried off by an attack of that disease.

The dissection of his body presented the following appearances. The left ventrical of the heart was nearly three times its natural size and strength. The parietes of that

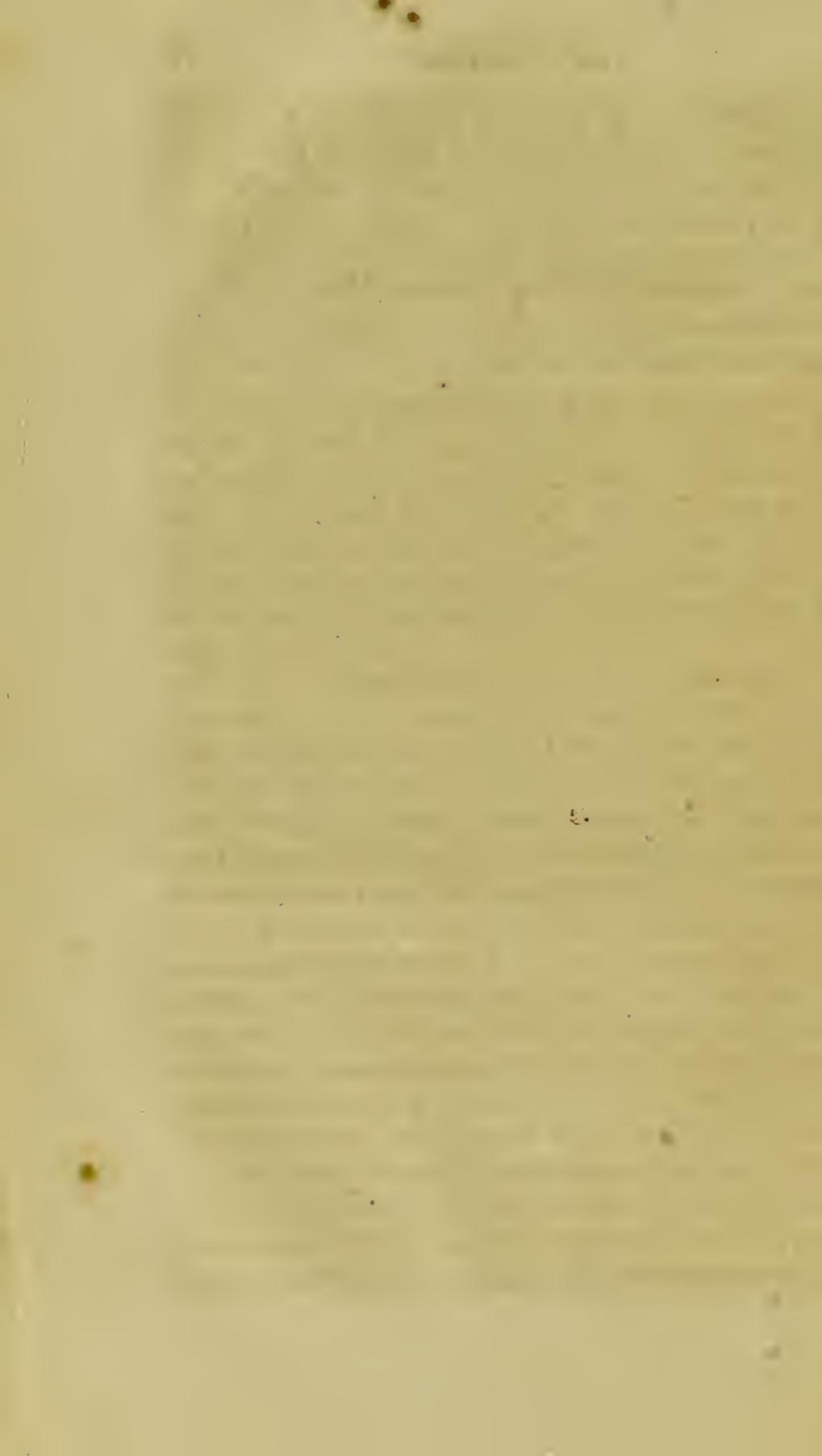
muscular cavity, were more than one inch in thickness, so that at first sight an evident disproportion was observed to exist between the power of that central agent of impulse and the rest of the machine. The left ventrical of the brain was filled with about eight ounces of coagulated blood. So violent indeed had been the attack of the disease, that the septum lucidum was torn, and the substance of the thalami nervorum opticorum, and the corpora striata was entirely disorganized.

On the 14th of May, the body was transferred for interment to the church of St. Genevieve. A funeral service performed at the parochial church of Auteuil, and at which were present numerous deputations from the senate, national institute, and the school of medicine of Paris, preceded this translation. His funeral oration was pronounced by M. Garat, a member of the senate, and one of his intimate friends.

Cabanis possessed excellent qualities, proofs of which and of the most ardent philanthropy, we discover in almost every page of his works; and the slight defects which he manifestly betrayed, are to be referred solely to a too great excess of sensibility. His standing as a physician, is sufficiently known. He was, as we have already said, no practitioner, and had made philosophical and theoretical medicine, the principal subjects of his investigation. Notwithstanding this, however, we should do injustice to his memory, were we to assert here that in his writings, all is theory; these certainly contain some practical views which would seem to have originated with a consummate physician: so well did his natural sagacity, and good sense enable him to view objects in their true light, and discover their relations.

But it is more particularly as a medical philosopher that he is to be appreciated, and, as such, he has undoubtedly rendered great services to the science; both in developing more satisfactorily than had heretofore been done, ideas al-

ready known, and in presenting new views. He evinced a decided taste for the science of ideaology, and studied it in preference to all others, because it presented a wide field for the exercise of his active imagination. Towards the re-establishment of the medical schools of France, he greatly contributed. He had himself proposed and afterwards forwarded their organization. Confessedly if Cabanis cannot be ranked among those celebrated physicians, who have been instrumental in the progress of the science, he must nevertheless be placed among such as have contributed in rendering its study more easy, and in clearing it of a hideous mass of errors, prejudices, and superstitions. To a clear intellect and superior judgment he united all the graces of elocution, and all the vivacity of youth. His conversation was instructive, animated, brilliant, profound, or light—in a word varied like his mind, which was familiar with every kind of study, and learning. He carried his goodness of heart so far as to become often the dupe of the wicked. The excellency of his character had caused and preserved him as many friends, as his talents had admirers: and procured to him the application of that sentence of the Coan sage that, *the philosophical physician partakes in some sort of the nature of the Gods.*



## THE AUTHOR'S PREFACE.

IN order to study and practice medicine, in a proper manner, it is necessary that some degree of importance should be attached to it, and for this purpose it is indispensably requisite to believe in its powers. If our art possess solid foundations in nature—if it can be useful—if its consolations be necessary to the unfortunate sufferer—finally, if it be a duty incumbent on the public authorities, to encourage and superintend our labours, too many means cannot be resorted to, in order to inspire with proper devotion those who are destined to its exercise; to make them fully appreciate the dignity of their vocation, and excite in them a proper degree of enthusiasm.

It is, I must confess, to perform this task, that I have taken up my pen. I have indeed thought that it would in some respect be sufficient to give an outline of the more important and general ideas, suggested by a subject susceptible of the most extensive development. Others will be enabled to complete the subject, of which a mere sketch is here presented; more learned hands will expose in detail, what I am content with tracing in a rapid and summary manner. Nor does this idea excite my vanity; it does more, since in affording me the hope of being useful to my fellow beings, it touches my heart; this constitutes the sole recompense I anticipate receiving from my imperfect work.

When we undertake to write on subjects little understood by the public, and at the same time endeavour to be brief,

we cannot expect to be well comprehended, by those who read in a superficial manner. When we do not wish to abandon the tone of discussion, we are compelled to reject all ornaments of style. I consequently beg both attention and indulgence from my readers.

*December 10th, 1788.*

P. S. The following work was intended for publication in the course of the winter of 1789; but interests, dear to every generous soul, since they had for their object the liberty of a great nation, and the happiness of mankind, offered a new direction to public attention. The movement, as is known to every one, was general; it suspended all researches purely scientific and literary, and the most intelligent minds devoted their meditations to subjects more intimately connected with social organization. Revolutionary struggles have, since that period, kept us in an almost constant state of agitation, very unfavourable to researches on speculative subjects, and the necessity and habit of being in a constant state of action, had even created in every mind precipitate and pre-emptory manners, which rendered this kind of investigation, for the most part fastidious. But sufficient opportunities have not been wanted to demonstrate, that such is not the method of hastening the progress of learning, and especially of perfecting the art of reasoning. Reflecting minds are moreover perfectly aware of the immense influence which the progress of science, and especially the good philosophical methods have exercised in the development and propagation of the spirit of liberty. It is through the medium of philosophy alone that liberty becomes refined and consolidated, whilst the sciences and the arts, at the same time that they serve to embellish it, convert it into a real system of happiness.

At this period, when the national instruction will undoubtedly be organized, on a plan worthy of the learning of the age, and the majesty of the republic, it becomes a matter of

absolute necessity, to determine the degree of relation existing between the different sciences—circumscribe their respective domains, and investigate properly the spirit assigned to each by the nature of things, that we may thus be enabled to apply to them with advantage, those general analytical methods, destined soon to effect a total revolution in the intellectual world.

Even were not medicine, in those affections which it possesses the power to relieve or cure, a direct source of utility, it would nevertheless, constituting, as it does, the basis of the only good rational philosophy, merit the greatest degree of attention. It alone is capable of unfolding to us the laws of the living machine; the regular march of sensibility in a healthy condition of the system; the modification which this faculty undergoes in a state of disease; and exhibits to our view the *physical* man, of which the *moral* man forms but a part, or in other words a modification. The physician not only traces to physical sensibility, the origin of ideas and passions, but even discovers, in some sort, their formation, or at least all that favours or opposes this latter; and it is always in certain organic conditions, that he is led to search for the solution of each problem.

Consequently, we can with propriety regard medicine as furnishing us with foundations, equally solid for that philosophy which ascends to the source of our ideas, and to that which traces the origin of our passions. On the one hand it must serve to direct all good systems of instruction, whilst on the other it discovers in the immutable laws of nature, a basis on which must be erected the rights and duties of man. In a word, in tracing to the impressions, and wants peculiar to each sensible order, the true causes or laws of the relations existing between all beings appertaining to it, or which are situated within its domain, it guides us in the study of the understanding, traces the plan on which this study should be conducted, and the manner in which it must

be perfected. From the same principle originates the rules on which the reciprocal conduct of these beings must be grounded, and likewise the true art of their happiness—the morals.\*

Medicine is productive of another very essential service. Together with all other physical sciences, and the arts that are founded on a careful observation of nature, it tends greatly to dissipate all those phantoms by which the imagination is deceived and tormented. By accustoming the mind to see in facts nothing but the facts themselves, or their evident relation, it extinguishes in their very origin, many errors arising from habits of an opposite nature—it destroys more particularly those which are united to physical absurdities, that is to say all superstitious opinions: and in thus promoting an intimate intercourse with nature, causes the mind to assume a spirit of independence, and the soul a degree of strength, which have been remarked at all times, in physicians fully deserving of that name.

From these reasons I have been induced to think; that at this moment, when medical studies are about to assume a new aspect, it would be very useful to show the great importance of the art; and that by presenting to students who devote themselves to it, particular motives for zeal and attention, derived from the degree of certainty to which this science can attain, I should confer upon them a service of no small magnitude; for this certainty once established, it will naturally follow that all the labours of the science, and all remarks relative to the most accurate methods of experience and reasoning, will be converted into as many sacred duties.

1st Vendemaire an 6.

\* I say morals in general, because each sensible nature has one peculiar to herself, and founded on the same basis.

# AN ESSAY

ON THE

## CERTAINTY OF MEDICINE.

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DEATH is the inevitable termination of life; pain as well as pleasure has been allotted to all sensible beings. By a law of nature we are doomed to suffer and die, as well as enabled to live and experience agreeable sensations; it is likewise natural to be affected with disease, as well as to enjoy a state of health. Nature, in the formation of her plan,\* rendered it requisite that all animated beings should be exposed to the influence of surrounding objects, and that the various modifications which, from the continued shocks they are made to undergo, should always be proportionate to the delicacy of their organs, and the importance of their functions. Consequently, although it may be said, that nature, in establishing so much regularity in the vital movements, has done much towards the preservation of individuals in a state of health, as well as towards the propagation of their species; nevertheless, sufferings and disease are the necessary results of the laws of the animal economy, and of those circumstances, in the midst of which the eternal author of the universe has placed all animated beings; and man endowed with faculties more elevated and noble, and enjoying the highest degree of that sensibility which by its development produces

\* In speaking of the plan of nature, I do not wish to be understood as going beyond the enunciation of a simple fact. Between the different parts which enter into the formation of the universe, there exists a certain degree of regular and constant relation; this is all I understand by the above term. The philosophy of final causes, although, owing to the limited understanding of man it has not been rejected, it has nevertheless never been able to sustain a serious examination.

them, is from these circumstances exposed to the action of many noxious and destructive causes.

In a state, therefore, approaching nearest to that of nature, no animal can be considered as placed beyond the reach of physical sufferings, and man, from his primitive constitution, would be more exposed to them than any other, even were he not, by social institution and habits, exposed to new dangers, proportionate to the extensive degree which these give to his relation with surrounding objects, as likewise to the aggrandizement of his existence, and the increased variety and mobility of the scenes of life. These latter causes, which abstractedly only, can be considered as foreign to him (since society exists in all places, and the only difference discovered between the savage hordes and civilized nation, is the greater or less degree of imperfection existing in the social condition of the former;) occasion visible changes in the physical disposition of man, and render him at the same time, more susceptible to the impression of all morbid agents.

To suffer and die, are, let me repeat it, the necessary consequences of our condition. But the desire to prolong life, and to avoid pain, is likewise a no less inevitable result of the first of our propensities. By nature we are taught to change a fatiguing posture, to apply the hand to painful parts, and to relax their tissue by the application of moisture and heat. She likewise directs us to seek repose, silence, obscurity, as soon as fever exalts and deranges the functions of our organs. Singular, and inexplicable appetites, become sometimes the means by which we are aided in discovering the remedies necessary to the restoration of health. In a word, when unsatisfied, all our wants are transformed into sufferings, and in this way nature manifesting her desires in the most positive manner, we may, with an ancient author, apply the name of remedy to all that satisfies a want, and consider instinct, or the cause of automatus movements, as the best of physicians.

Some philosophers, viewing the laws of instinct as the results of certain particular reasonings, which, owing to their rapidity, are inappreciable, have attempted to submit them to the same principles as those of our more common judgment. It is, however, impossible to refuse believing in the existence of a secret guide, by which all animals previously to making any attempts, are directed to the choice of aliments proper for their nourishment, and likewise to the selection of those remedies necessary for the removal of some of their maladies.

All new born animals draw milk from the breast of their parent, without receiving instruction from any one. The kid which by Galen was extracted alive from the womb of its mother, chose, as we are assured by this physician, the cytisus, from among a number of plants which were presented to it. We daily witness dogs and cats exciting in themselves the action of vomiting, or bringing on salutary diarrhoeas, by the use of fresh dog grass. Dogs lick their wounds and those of their young ones, and in this way effect their rapid cure. Storks, it is said, administer glysters to themselves. In restricting ourselves to the citation only of authenticated facts, we could without difficulty establish the correctness of an opinion supported by the testimony of the most eminent physiologists, "that nature,\* takes of herself the surest paths, and without being instructed, points out what is necessary to be done—*Natura sibi invenit vias, et inerudita existens, quæ expediunt perficit.*"†

But it must be confessed that in man, living in society, instructive medicine is restricted to narrow limits, although it might have been more extensive in its resources, and more effectual in the application of its means, during a more simple condition of things, and is of itself sufficient to animals liv-

\* Nature is that power which produces those actions peculiar to each body; or else the union of the laws by which this body is governed: in this latter sense it is, that Van Helmont calls it the *order of God*.

† Hippocrates

ing beyond the reach of our sway. We should not, it is true, lose sight of it in the practice of our art; since it has often directed this latter, and may still continue to do so; but it is far from affording it as much light as many enthusiastic writers have been pleased to affirm.

Other animals are with much greater security, guided by their instinct; since in them it is never misled, by those numberless ideas, prejudices or passions, which serve so powerfully to pervert the human species. And, moreover, since those cases, to the aid of which it is applied, are very simple and uniform, no foreign cause prevent it from successfully guarding the preservation of the individual, and labouring efficaciously in the cure of its diseases.

It is owing to the fact that nature has elevated man above other animals, that this secret voice directs him more feebly and obscurely: Instinct is the less powerful in proportion as the degree of development in the intellectual faculties augments. In proportion as reason is perfected, this guide, for which it cannot, in all instances, serve as a suitable substitute, loses a portion of its exactness, and finally becomes reduced to a state of almost total inaction. Does it follow from this, that animals have been better treated than ourselves? and do we sustain daily losses, in proportion as we are obliged to substitute, for those natural appetites, by which we were directed whilst in a state of nature bordering on theirs, reflection, calculation, or that slow experience, the trials of which are not always free from inconvenience, and their results, but too often doubtful and difficult to be anticipated? The elucidation of these questions is unnecessary; because it is not within the reach of our power to cease to be man, and because, in fact, the unlimited perfectibility of our species opens to our understanding a wide field of enjoyment and happiness.

I shall consequently lay aside all declamation in favour of what is called the state of nature—of which there exists perhaps no example, and of which those authors who have treat-

ed the subject with the greatest prolixity, have presented us with but vague ideas. I am entirely ignorant of the power which the inspirations of instinct might exercise in such a state, in the treatment of diseases; the investigation of this subject is foreign from my present purposes. Consequently, avoiding here all hypothesis on all the other *possible* conditions of the human race, I shall take man such as he is found in the midst of society, endowed with all the faculties to the development of which it leads, and with all the means which it serves to improve; and starting from these fixed points, I propose to examine whether, by the aid of observation, and of the simple reasonings which are naturally deduced from it, the principles of medicine can be rested on a solid basis, or whether the charges of uncertainty, as adduced against this art by many philosophers, have in truth some degree of foundation. This question appears to me alike interesting to those who are in constant need of its aid, and to governments whose duty it is to watch over the public safety.

#### *Objections against the certainty of Medicine.*

The following are the reasons alleged by the cavillers against medicine:

1st. The secret principles of life elude all our researches, and we are left ignorant of the principle by which we are animated, and of the means by which it exercises its actions.

2d. We are in absolute ignorance of the nature and proximate causes of diseases.

3d. Diseases are so various and so susceptible of complication, that it is impossible, from the most careful examination of them, to lay down any fixed rules by which they may in all instances be discovered. They undergo so many modifications from age, sex, temperament, climates, season, state of the atmosphere, regimen of the patient; from his previous

complaints, and, finally, from his habitual passions, and present state of mind, that, amidst so many and various causes, it is impossible to assign to each its due proportion of agency; to give to each phenomenon its just value and natural place, to form a suitable plan of treatment; in a word, to draw inferences of a nature so certain, as to be worthy of the importance attached to the healing art.

4th. The nature of substances employed as remedies, is to us a mystery; their mode of operation in the system is still less understood; and in all probability, we shall never possess the means calculated to lead us to a perfect acquaintance with the nature of their phenomena.

5th. Medical experiments are still more difficult than the study of disease, and of a nature more doubtful and fallacious than the axioms of diagnosis and prognosis, which this study prevents. The effect of a particular remedy may depend upon a multiplicity of causes, entirely unknown to the physician. The silent, yet constant operation of the vix medicatrix, always tending to re-establish order in organized bodies; the progress of the disease itself, the nature of which may not be duly understood; the changes supervening in the physical and moral condition of the patient, or in the external circumstances capable of acting upon him; all these are without doubt liable to impose on the soundest mind, and to cause him to attribute to his own combinations, success which in reality depends on causes of a very different nature. Hence arises an inexhaustible source of error, both for the artist, and the art itself.

A cure follows the application of a remedy; the remedy therefore has produced the cure; *Post hoc, ergo propter hoc.* This is undoubtedly, a specimen of very bad reasoning, yet by this fallacious rule have all the articles of the *materia medica* been arranged, and the mode of administering them reduced to a system. Assuredly nothing demands a more enlightened mind, more sagacity, and circumspection than the discovery of truths of this kind; nothing is easier than

to be led astray, even whilst pursuing the right path in their investigation; nothing is more uncertain than the proofs upon which we rest at the very time when we imagine we have obtained the most positive results. And indeed, if it be almost impossible to determine accurately whether or not a patient be effected with a given disease, it is still more so to prove that a remedy will produce, or has already been productive of a given effect.

6th. If the science of medicine rested on a solid foundation, its theory would at all times have been the same; and its practice more particularly, would not have undergone as it has from one age to another, the most extraordinary changes. Physicians, ancient as well as modern, those of all countries, and of every school, would, at least on the same points, have remained unanimous in their opinion. But let us trace the history of their opinions, and we shall discover the greatest diversity to exist in their respective views, and the most evident opposition in their plan of treating diseases.

Herodicus overthrows the edifice raised by his predecessors, Hippocrates in his turn destroys the greater part of that built by Herodicus. The schools of Cnidus and Cos are in perpetual opposition. The dogmatics endeavoured to arrive at truth by means of hypothesis and of a series of reasonings. The empirics on the contrary would almost banish reasoning from their practice and restrict it to the pure and simple observation of facts.

Asclepiades, establishes a new system of medicine, founded on the corpuscular philosophy. He believes that on the more or less intimate degree of relation existing between the molicules, and pores through which they must pass, depends health or disease. He disdains and tramples on all the labours of the fathers of the science.

Themison reduces it almost to nothing. He classes all

diseases under three heads:—the state of constriction, that of relaxation, and one of a mixt kind, participating of the nature of the two former. He consequently recognizes only three indications, corresponding to these three different states, and to them he refers all the effects capable of being produced by remedies.

The Pneumatics, following up the idea of Hippocrates or of his first disciples, place the seat of life in the air circulating in our vessels; all aberrations from a state of health depend, according to these, on the derangements of its movements.

Galen resuscitates the Hippocratic medicine: the crises, the powers of nature, the faculties, the combination of the elements; dryness; humidity; heat; and cold, are again brought forward, and to afford a greater degree of splendor to the system of temperaments, he completes the doctrine of the humours, of which Hippocrates had presented but a sketch. But is it not evident that his attempts to extend it have only served to render it more defective and uncertain?

The Arabs nurtured with the dreams of philosophy, introduce into medicine the abstraction and formulæ of Aristotle. In their hands the science becomes peripatetic, in the same manner that it had been Epicurian in those of Asclepiades and in a similar way that it has since been, at different times Cartisian, Leibnitzian, Newtonian, &c.

The Alchymists, and more particularly Paracelsus, endeavour to subject the animal economy, to the influence of their new whims. They commit to the flames the works of the ancients, and with these believe it possible to annihilate all the known laws of nature. Its slow and progressive observation little suits the impetuosity of their minds; its spontaneous operations displease them, and they endeavour to accelerate, moderate, direct, and change at pleasure all its movements. They seek for a remedy adequate to the fulfilment of every indication, and imagine they have discovered in

their retorts, the art of prolonging life. In their salts, sulphurs, mercury, and earth, they find substitutes for the humours of Galen, or the elements of Hippocrates. Finally, by these bold reformers the precepts of the Greeks and dogmas of the Arabs, are almost wholly cast into oblivion.

Van Helmont embraces many of their extravagant notions; but extends, changes, or perhaps improves many points of the alchymical doctrine. Notwithstanding his continual declamations against the schools of medicine, and the frantic rage he manifests when speaking of the ancients, he derives from Hippocrates all his ideas relative to the vital principle. What the Coan sage called *nature*, he denominates *Archeus*, and thus imagines, that by the adoption of a new word he will merit the title of creator of the healing art. Believing each organ to possess its peculiar mode of movements and action, together with a secondary influence, more or less remarkable on neighbouring parts, and sympathies of greater or less extent, on distant ones, he comes to the conclusion that it constitutes a separate being, endowed with a life peculiar to itself; that the body is a sort of society, made up of the union of all these separate organs, and that human life is the result of the combination in one system of all these lives. Finally, he admits the existence of several centres of sensibility, and furnishes us, if not with the first hint, at least with the first precise ideas regarding the Diaphragmatic power and of the influence of the stomach, on the cardiac orifice of which he establishes the throne of his *Archeus*.

The chemists, or at least those among them, who may be considered as the least extravagant of all, view the human body as a laboratory; its organs are transformed into alembics, stills, matrasses, &c. Like Prometheus of old, they imagine that it is possible to steal fire from heaven, and to excite or retard its progress with as much facility as they do that of their furnaces. They speak of nothing else but precipitations, fermentations, and cohabitations. The acid com-

bats the alkali; the alkali neutralizes the acid. From the effervescence produced by the union of these two adversaries, result animal heat and life. Medicines produce their effects by virtue of their chemical properties and of those of the humours with which they come in contact, and from this it very naturally follows that experiments performed in dead vessels will serve to illustrate the effects likely to arise in the living system.

Were we prepared to credit the geometrical physician, we could, with the aid of algebraick calculations, explain all the movements of the body, all vital tendencies and all the functions. The greater or less acuteness in the angles of the vessels; their diameter, axis, their straightness or curvature, the compound ratio of the action of solids, the impulse of the fluids, and their reciprocal resistance; all these are circumstances necessary to be well understood to enable us to form a just idea of life, and likewise to comprehend the manner in which it is exercised, kept up, repaired and finally is extinguished, in a similar way that a ball stops, when the force by which it has been moved, is destroyed through the effect of friction.

According to the natural philosophers, the great problem of life, can only be solved by calling to our assistance attraction, cohesion, elasticity, force and counterforce, in fact all the laws which govern inorganic matter.

Listen to the mechanics; they sometimes call into requisition, pulleys, levers, fulcrums; at others, tubes, valves pistons, &c. One would imagine himself placed in a watchmaker's shop; whilst by the ancients he is in truth, led into that of nature, which they compare to that forge of Vulcan, where the tools as well as the works of the artist were all endowed with animation; and from whence tripods were seen to proceed of themselves to the banquets and councils of the Gods.\*

\* This comparison is taken from Galen.

In his system of the living solid, Hoffman approaches somewhat to the Hippocratic philosophers; but calls to his aid a great number of mechanical notions.

Stahl concedes to the cause of vital action, intelligence, deliberation, and choice; and by this distinguishes his theory from all others.

His disciples, the animists, deduce from this doctrine practical conclusions, more decisive, extended, and consequently more dangerous.

Boerhaave endowed with agencies extensive, methodical, and enlightened, with a mind possessed of the learning of his age, and well versed in ancient literature, endeavours to call into requisition all their ideas, to reconcile their various theories, and thus to embody in form of doctrine all their scattered and even contradictory dogmas. According to him, chemistry, natural philosophy, geometry, mechanics, may all be applied with advantage to medical science.

Nevertheless, some men possessed of genius and judgment, while they acknowledged the loftiness and exactness of his views, have opposed the practical conclusions deduced from the theories he presents; they have forcibly maintained, that embarrassing the art with the accumulation of so many foreign treasures, and establishing so many frivolous or even fallacious relations between it and the other sciences, was the surest way of improving it.

The Semi-animists, modifying the opinions of Stahl, approach them nearer to those entertained by Hippocrates. Whilst the school of Montpellier presenting them in another point of view, develops the laws of sensibility.

Finally, the new solidists of Edinburgh, reviving the system of Hoffman unite it to some of the ideas of Baglivi; and although retaining some of the opinions relative to the sensitive principle, they misconstrue its deductions, by certain

entirely hypothetical notions, or else lessen their utility by adopting a practice both inert and pitiful.

This rapid outline of the revolutions experienced in medical theories, although far from complete, will nevertheless be found sufficiently comprehensive to show, how inadequate those books are in which these theories are presented or combatted for the purpose of removing all the doubts adduced against the certainty of the medical art, for which these theories themselves are intended as a basis, and what appears more extraordinary when we examine them, is the tone of arrogance and decision assumed by so many authors, although in continued opposition to each other.

But can we not adduce the same charges against practical authors? A remedy recommended by the one, is condemned by the other; a fact said to have been observed by the former, is denied by the latter. In consequence of this fact, the most simple axioms, the truth or fallacy of which it seems the most easy to establish, remain in the mind of a judicious reader enveloped in the clouds of uncertainty.

But let us abandon books, and follow physicians to the bed side of their patients, and we shall again discover the same disputes, the same contradictions, all of which are well calculated to strengthen our belief in the uncertainty of medicine. In fact that we should be enabled to judge for ourselves, we must appeal to our own experience, which proves that with the exception of a practical physician, every one apparently must remain, in relation to the action of medicine, in a state of complete scepticism.

7th. But even granting that physicians had arrived at the knowledge of the vital principle of the nature of diseases, of their causes, of the circumstances which tend to modify them in their progress, or supposing that it were possible to establish more certainty in the principles of the art, or a greater precision and force in the delineation of all cases; were he capable of determining with accuracy, the effects of the va-

rious substances used as medicines, and which should be viewed as so many species of poisons, since they are productive of their effects, by virtue only of the derangements they occasion in the natural order of the organic movements, granting that all writers, theoretical as well as practical, were unanimous in their opinions, or differed on subjects only of minor importance, and that we were not in the daily habit of witnessing a number of indecorous debates, excited by practical subjects: Finally, granting the existence of medicine, and that the art rests on a foundation similar to that on which all the other sciences are placed; still, the exercise of its functions would demand so many and diversified acquirements, so much sagacity and attention, together with such great moral qualifications, that it would be within the reach of very few individuals; this alone should serve to refute the possibility of its existence, or at least cause us to regard it as a dangerous weapon placed in the hands of ignorance and empiricism.

## SECTION II.

*Observations on the early discoveries in Medicine, and on the progress of the human mind, in the deduction of rules resulting from these.*

IN the recapitulation of the preceding objections, I am inclined to think I have presented them all in their strongest light. But before entering into the serious examination they would seem to require, I believe the subject might receive some elucidation from a rapid sketch of the labours of the early cultivators of the science of medicine. The efforts of these inventors, and the methods employed by them, will enable us to form some estimate of the degree of confidence we should attach to their discovery; and on the other hand, the nature of these discoveries, will make us appreciate, with so much the more accuracy, those methods and efforts of which they are the results.

We have already said, that as a necessary consequence of their nature, and owing to the effect of causes, the action of which it is not always in their power to avoid, all animated beings are doomed to suffer pain, and condemned to die. Before its birth, but more particularly at the moment it is brought into the world, the infant itself becomes for its mother a cause of disease, or at least of the most cruel sufferings. So long as its newly formed organs have not acquired their full degree of development, the child remains exposed to the action of all external agents, and its physical condition is liable to be singularly modified by causes the most trifling. A greater degree of nervous mobility—more softness in the solids—less energy in the assimilating functions; in fact, a thousand particular circumstances, too long to be enumerated here predispose the child to the attack of those very many disorders, which, in all climates, and among all nations, have rendered the period of childhood one of the most dangerous of

life. Neither is the natural development of its system, or the various revolutions, to which, in the course of years, it is subject, altogether void of danger. The period of growth, or that at which, when having reached manhood, it is acquiring new faculties—these, I say, are sufficient to cause derangement in a machine, so much the more irritable as the tonic movements are executed with less energy; and even capable, in some instances, of destroying their action through means of those very efforts, which, by nature, were intended for the completion of its development.

The ancients had formerly made the observation, that at the age of seven, fourteen, twenty-one and thirty-five, there occur remarkable changes in the animal economy—that at these various epochs of life, some men are relieved of diseases under which they had before laboured—and that they contract, or at least become predisposed to others, with which they had not before been affected. These periods, according to them, should be viewed as so many moments of struggle, when nature endeavours to substitute to first impressions, others rendered necessary in order that she should be enabled to accomplish her ultimate designs; and these struggles, they believed, cannot take place without causing in the economy a violent degree of agitation, and producing in all the various functions changes which, though for the most part only momentary, are nevertheless evident.

Those changes, observed by the ancients, are subjected to the order mentioned in their writings, and follow their great revolution of ages; this is a fact, the truth of which cannot be called in question, since it receives confirmation from the results of daily experience. They are accompanied, in the greater number of instances, with a species of febrile excitement—sometimes succeed to acute diseases, and in other instances they must be regarded as causes of these latter; since many of these maladies must be viewed as the critical movements of the period they complete, and as depending upon

the laws by which the body is made to undergo the various degrees of growth, and is insensibly led to the epoch of its maturity.

But if the periods at which the various revolutions occurring during the development of the human being, be determined, other revolutions of an inverse nature are likewise manifested during the decay of his system; and these climacteric epochs, inducing, as they do, new modifications in the nature and order of the debilitated vital actions, are in like manner remarkable for the diseases they produce, or by which they are prepared or brought about. In fact, would we not be warranted in regarding old age as a disease of unlimited duration and invariably fatal, but the progress of which, like that of all other maladies, is ordained by nature?

In women, the appearance of the first menstrual discharge is in a great majority of instances, preceded by very serious disorder in the system, and its periodical return occasions every month some indisposition; whilst the period of its total cessation, denominated *critical*, is in truth attended by such dangerous consequences, as to cause the death of at least one-fourth of the women who have reached that age, or to doom them to the most cruel sufferings.\* Finally, if women who bear children are, from this circumstance, rendered liable to painful and serious disorders, those who do not bear any are exposed to diseases still more terrible, and in this way are punished for resisting the propensity to which nature seems to have attached the greatest degree of importance.

Independently, therefore, of those errors in regimen, often inevitable—of the inclemencies of the atmosphere, against which it is not always in our power to guard—of the epidemi-

\* The Greeks, in their allegorical language, were in the habit of saying; that such women were struck by the arrows of Diana, whose planet (the moon) presided over menstrual evacuations. It is in this sense that Andromache says of her mother

Παῖδες δ' ἐν μεγάροισι Βαλ' Αρτέμις ιοχεῖαιρα.—*Homer's Iliad.*

eal constitutions of the air, which seem to baffle our utmost precautions; independently of the agitation caused in the living frame, by the passions, either directly, through the medium of the intimate relation existing between the physical actions, and moral tendencies, or else indirectly, through means of the many derangements introduced by those very passions into all the details of our conduct: finally, independently of those poisonous substances, and of certain contagions, which appear to produce their action in a similar manner, disease and pain are intimately connected with the functions of life.

I have already said that the desire of prolonging this transitory life—of calming sufferings by which it is rendered painful to support—of curing those diseases which threaten it with destruction, was as natural to man, as the most imperious of all his wants; and that through the medium of instinct he was inevitably led to search for situations most appropriate for his cure, and sometimes to desire for substances capable of acting on him as remedies. This desire forms the motive of medical researches, whilst instinct has furnished subjects for the earliest observations made in medicine.

During a paroxysm of asthma, the patient seats himself in bed, and in order to receive a free circulation of air, causes all the windows to be thrown open. In catarrh, on the contrary, he becomes more sensible to cold, wishes for more covering, confines himself in his room, craves warm drinks, and, owing to a diminished appetite, eats but little. In an inflammatory disease, he more particularly desires for diluent drinks, cool air and little covering. Is he affected with putrid fever? he refuses all kind of animal food, he is disgusted with the smell of meat, the thought of which, in some cases, is sufficient to excite vomiting. On the other hand, with what delight does he not accept of fresh acidulated fruits and drinks, and more especially of wine, which, independently of the property of correcting any putrefactive tendency, possesses that of reani-

mating the debilitated powers of his system? In all fevers of an acute character, that position of the body is chosen in which the muscles being made to expend a less degree of force, afford a greater one to nature for the performance of coction. In a word, in man, the powers of instinct are made manifest, when, through the influence of civic life, his propensities have not been too materially impaired, and when the efforts of his imagination have not served to mislead it from its natural path. In the early periods of medicine, instinct supplied the place of science, and subsequently has been found to direct it in its progress; it can moreover supply its deficiencies, and afford it further light, and in our curative efforts, the indications it offers should never be entirely overlooked.

In addition to this, I have already said, that in proportion as reason is developed, so instinct would seem to lose much of its sagacity. It proves the most fallacious of guides in those many complicated maladies to which social man is exposed. But, although at the present time it furnishes medicine with neither extensive views or great resources, still we are forced to confess that in the origin of the art, it was from instinct alone that a knowledge of the first and most simple of all medicines was derived.

Independently of this general means by which the vital principles watch over the preservation of animated beings, other actions are produced in these latter, of which they are not conscious, although their effects tend in like manner to the re-establishment of order, either by evacuating morbific matters—restoring them to the nature of healthy animal fluids, or finally by changing, in a manner hitherto undetermined, the morbid condition of the most delicate organs. The study of these preservative efforts, is the most fruitful and pure source of the history of diseases, and of curative attempts. In its infancy, the art drew from it its earliest treasures; and even now, after the revolutions of so many ages, and the

accumulation of so much labour, it continues to derive from it its most precise notions, and exact views.

We are naturally led to the belief, that the first cultivators of medicine, limiting their inquiries to the appetite of their patients, were contented with noting the success of this method. They observed, for example, as we have already taken occasion to notice, that individuals labouring under an aberration of health, evinced a constant desire for a horizontal position, and for diluent drinks, obscurity, silence, &c.—that those enjoying these several conveniences, were the soonest restored to health; whilst such as, from a number of particular circumstances, were not able to provide themselves with them, remained sick a longer period of time, dragged out a miserable existence, and, sometimes, finally sunk under the weight of chronic sufferings. From the constant observations of these united facts, many practical deductions were drawn, which, though simple, were of extensive application, and which, when confirmed, rectified, or limited, by subsequent researches, were ultimately transformed into so many medical axioms. This was the first step in medical observations.

It was more especially found that nature, in general, cured disease by inducing some salutary evacuation; that this evacuation was preceded by a greater derangement in the economy, and that whenever its occurrence was not necessary for the re-establishment of order, changes the most singular were occasioned in the body, through means of the increased action of the organs; thus restoring the humours to their pristine condition, and imparting to them their proper degree of vital energy. This, which constitutes the second step, is of the utmost importance.

Patients were not all restored to health in the same manner. Some experienced vomitings, diarrhoeas, or an increased discharge of urine—many again expectorated mucous or puriform matter, or were affected with copious sweats, or finally with

hemorrhages from the nostrils, or some other of the emunctories.

But diseases did not always terminate so favourably, since nature was not in all instances sufficiently powerful to overcome them, nor adequate to the expulsion of the morbid cause from the system, or to render it harmless by depriving it of its deleterious qualities. In such instances, her restorative efforts were but feeble; or if she exerted some more energetic actions, they were found to be partial, or directed differently from those observed in the preceding cases, and death, which soon terminated this ineffectual struggle, by calling attention to the various phenomena which had preceded it, caused them to be indelibly fixed in the memory. From these circumstances, observers were taught, whenever the same combination of symptoms was discovered in another patient, that nature was little to be depended upon, and that from the resources of art alone they could confidently expect to derive the means of cure.

Diseases resemble each other, neither by the desires they inspire to patients—the crisis they occasion—their termination, or by the length of their duration. Although many maladies appear possessed of the same genius—present the same train of phenomena, and observe, in their progress, a similar order; nevertheless, they cannot all be regarded as being alike. In order to effect their cure, nature employs an uniform method, or when unsuccessful in her efforts, her failure depends in almost all instances, on the violence of symptoms nearly similar. Consequently, on the one hand, all diseases cannot be viewed as a unit, whilst on the other, it is not necessary to regard them as so many individual beings; they may, however, for the purpose of assisting memory, be arranged in a manner similar to that employed in the classification of animals, plants, fossils, &c. Although it be true that these arbitrary divisions of diseases have given rise to an extensive source of error, still it must be confessed that the mind requires some method

in order to connect its various branches of study; and provided that, in the adoption of this method, no spirit of system be followed, that it be limited to the representation of certain striking relations existing between different phenomena; or, finally, that no other deductions than the preceding, be drawn from it, it may be regarded not merely as indispensable, but likewise as of the greatest utility, and free from inconveniences.

Nor is it difficult to believe that from a difference found to exist in the duration of disease, the first distinction between them was drawn. Those most rapid in their progress were denominated *acute*; whilst others, more tardy in the production of their effects, received the appellation of *chronic*; two names of happy conception, and offering a fair specimen of the animated language of the Greeks, from whom we have derived them.

Other distinctions or classifications were next formed, according to the difference existing between the various phenomena of diseases, or to that observed in their crisis and termination, or finally, according to all circumstances in which they differed from, or resembled each other. These classifications were likewise founded in nature, and are perhaps of greater utility to the healing art, which merits this title, in those instances only when it is capable of forming complete and complicated plans of treatment.

Those divisions, founded on the temperament, mode of life, habits of the patient; in a word, on all those circumstances, which, preceding the disease, may be enumerated among its causes, were framed much later; and when physicians were capable of embodying them in systematic form, the science of observation had already made considerable progress—the method of description was carried to perfection—the virtues of the first remedies were well appreciated; medicine, in fact, was now no longer in a state of infancy.

Whilst philosophers were thus actively employed in observing, describing, and generalizing the proceedings of nature, and drawing from these all the deductions of which they were capable, they nevertheless continued to exercise their judgment, and were far from remaining the simple spectators of these phenomena. By the inspirations of instinct, they had been taught to avoid aliments, and directed to the employment of drinks, either warm or cold; sometimes aqueous, mild, or diluent; at others acidulous, aromatic and spirituous. The administration of these substances was, it is true, at first subjected neither to rule nor scientific calculation; but their beneficial effects had been observed, and whenever the voice of nature ceased to be the guide, the analogy found to exist between the various cases observed, was sufficient to warrant trials of the same means. It is to be confessed, that the ancients in their attempts were guided at first by simple probabilities, for which they could substitute nothing more proper. But by means of experience these probabilities were soon converted into practical certainties;\* or whenever they had been led into error by false analogy, the necessity of ascending to the very origin of their error, and of appreciating, in future, these equivocal symptoms, contributed to render them more attentive, whilst it likewise improved the acuteness of their observations, and perfected the soundness of their judgment.

Thus the effects produced by remedies, threw light on the study of disease—introduced in the detail of their histories more precision and exactness, and prevented those too sweeping conclusions often so hastily deduced from their examination; whilst, on the other hand, the investigation of diseases, after having suggested the employment of the first remedies,

\* I shall explain hereafter what I understand by *practical certainties*, and how I distinguish them from those of an abstract nature, and deriving their origin from reasoning.

caused, with the aid of analogy, their application to be more general, and, by confirming their utility through means of ultimate experiments, has endeavoured to subject their administration to precise and positive rules.

The manner in which the *vis medicatrix naturæ* was found to govern critical actions, and to produce salutary evacuations, or else those movements by which they may be substituted, contributed *not a little essentially*, in causing the adoption of the most exact notions and fortunate combinations. For instance, it had been observed, that an acute pain in the side, accompanied with increased heat, difficulty of breathing, cough, bloody expectoration; that these symptoms, I say, were relieved on the accession of a puriform expectoration; that this evacuation, when it occurred without agitation in the system, afforded a certain and rapid cure; that its suppression was capable of occasioning death, or its interruption a return of the former symptoms. It had been remarked that all crises are produced by means of an increased action in the functions of life itself; that they were, on the contrary, prevented, or at least retarded, in their progress, when this action was diminished; and that a no less fatal effect resulted from its too great energy; consequently that it became of the utmost importance to retain the vital movements within just bounds, or they should be brought to a medium state, a precise and exact knowledge of which can only be acquired by attending, in all cases, and under all circumstances, to the appearance of the disease.

The ancients had likewise observed that each disease has its proper crisis, and that nature, in all such instances, employs it in preference to all others. But that, nevertheless, cases present themselves, in which, owing to some obstacle arising in the condition of the organs, or owing to some circumstances impossible in the physician to determine with accuracy, the crisis takes place through some other emunctary, and nature arrives at the same end by less familiar means.

For example, a pleurisy, of which we have just spoken, was found to terminate not only by a critical discharge from the skin or kidneys, by which expectoration is often superseded, but likewise sometimes by means of evacuations of bilious matter from the intestines; a kind of crisis rarely observed to occur in essential diseases of the chest. Finally, the older physicians had observed that in some instances nature fails in the accomplishment of her design, and even, at times, runs into, or creates danger herself, by directing her efforts without due discrimination, and carrying the evacuations to the last degree of exhaustion.

On the other hand, from the natural desires of the patients, from analogy, chance, or even from fortunate conjectures, it had been found that certain substances, when applied to the human body, were adequate to the production of these same evacuations, and to the determination of the same actions,\* by which diseases are spontaneously cured. Among these various substances, some excited vomiting, purged, or produced an increased discharge from the skin or kidneys; some caused an increase in the strength of the debilitated system, moderated it when too much excited, or else maintained it in a sort of medium state; others, finally, put a stop to vomiting, diarrhoea, perspiration, and appeared to act, sometimes by constricting all the emunctories, in other cases by diminishing their sensibility, and inducing in the system a state of calmness, the precursor of sleep, in which the soul itself seemed to participate.†

\* Man, owing to the very great sensibility of his organs, is of all animals, the most susceptible of modification from the action both of aliments and medicines. Bacon observes that this fact, whilst it proves the great power of the science, is likewise the source of its many errors.

*Subjectum istud medicinæ (corpus nimurum humanum) ex omnibus quæ natura procreavit, maxime est capax remedii; sed vicissim, illud remedium maxime est obnoxium errori. Eadem namque subjecti subtilitas et varietas, ut magnam medendi facultatem præbet, sic magnam etiam aberrandi occasionem.*

*De Augm. Scient. l. 4. c. 2.*

† Bleeding and bathing should be ranked among the most important

As soon as the knowledge of the virtues and application of medicines had reached this degree of perfection, the greatest difficulty was overcome; the rest could only be the work of time, of active curiosity, but more particularly of necessity, which causes new means to be constantly invented, and becomes more imperious in proportion to the increase of those of all remedies. From the history of medicine we learn that they were known in the remotest periods of antiquity, which is likewise proved by their extensive application by Hippocrates. He recommends the warm and cold baths, and even details the effects obtained from them in different cases.

By Hippocrates, almost all the veins of the body were at times opened, and he likewise made use of scarified cups. At the period in which he flourished, arteries were sometimes cut or burned; which operations could only have been performed after many experiments, and more timid attempts.

In all countries, man, for purposes of cleanliness, requires water; and this necessity is more especially experienced in the warmer latitudes, when bodies scorched by the sun or covered with dust, having felt the refreshing and agreeable effects of a bath are naturally inclined to a frequent repetition of it. Its effects can consequently be daily observed, in almost all cases imaginable. When the weather becomes cold, spring or river water produces in those who obstinately continue to bathe in it, disagreeable sensations; consequently it is heated, and now produces impressions of an agreeable nature, though different from those resulting from the use of the cold bath. This, therefore, constitutes a new want, a new habit, and it necessitates the performance of new experiments. It is also evident that the warm bath produces in the condition of the body, changes sometimes salutary, at others of a contrary nature; and that these differ essentially from those occasioned by the cold bath. This will be sufficient to attract the attention of observers, and to suggest beneficial attempts in the treatment of diseases.

From the ancients we learn that Medeas was the first to employ the warm bath with this intention. By means of this remedy she rendered the skin softer, and the limbs more nimble. From this circumstance it was that she was led to assert that she had discovered the means of making old persons grow young, and that she was accused of boiling them in large kettles. But this tradition, disfigured by the fables which accompanied it, is perhaps itself fabulous; and notwithstanding the many efforts employed by the interpreters of antiquity to prove this story to contain some valuable lesson, we are forced to conclude that it teaches us nothing.

it already possesses. They saw, and were fully convinced, that the manner in which men had been led to their first discoveries, could aid them in their ultimate researches. The object was placed before their eyes at a distance—the road by which they could arrive at it was already traced, and truths, to them of the greatest interest, were progressively to be brought to light at various epochs.

Of the origin of bleeding we are still ignorant. It is said that Podalirius, returning from the siege of Troy, effected the cure of the daughter of the king Damæthus, (who had experienced a serious fall) by bleeding her from both arms. Pliny tells us that the hippopotamus, when it has acquired a too great degree of corpulency, bleeds itself by rubbing against sharp weeds. The truth of this fact is, however, doubtful, as well as its having furnished man with the first idea of the utility of this remedy, as mentioned by the author just quoted.

It is probable, that after having observed the fact that spontaneous hemorrhages are productive of the crisis in many diseases; that in women the retention of the menses, and in men that of the hemorrhoids, became the source of many accidents, whilst their reappearance is the signal of health: after having seen that wounds were in general cured with more rapidity when permitted to bleed, and that in such cases the vessels, especially those void of pulsation, cicatrize with great facility—it is probable, I repeat, that from the observations of these several facts, the ancients were led to attempt by art the accomplishment of what had been often produced by mere accident, or through means of the efforts of nature.

Apoplectic patients have been known to be cured by hemorrhages from the nose or from the temporal arteries, occasioned by falls on those parts. The first observers of nature (who, at a period when learning, views, and means, were in a state of infancy, and when attention, undisturbed by theoretical hypothesis, was directed solely to the investigation of facts, lost no opportunity of acquiring knowledge) must have likewise witnessed such accidents.

Galen relates a case, which, had he not been well informed of the beneficial effects derived from the judicious use of bleeding, would in all probability have suggested to him the idea of its utility. He was called to a man who had received a wound in the lower part of the leg. The hemorrhage, which was violent, had already continued a long time, notwithstanding the application of styptics; for the division of the artery being only partial, prevented the contraction and retraction of its two extremities. Galen completed the section of the vessel; the hemorrhage stopped, and the man was cured. Nor was this the only cure; for by the great loss of blood which he had sustained, he was relieved of an old sciatic pain.

These remarks, without entering into a more minute examination of the subject, will serve to show the manner in which the inventors of medicine, guided as they were by nature and circumstances, were led to make observations—to extend them by analogy—to rectify them by ultimate experiments, to embody them methodically, and to place in a similar order all the deductions to which they would naturally give rise. The art, consequently existed at the period in question, not with the numerous improvements of which it is susceptible, and at which it will perhaps never arrive, but with all the means necessary to lead to their attainment. The ancients were acquainted with the state of health and with that of disease; not by means of hypothetical subtleties, but through the medium of *signs, both evident and unequivocal*. They had succeeded in distinguishing diseases from each other, in foreseeing their progress, crisis, and termination—they had learned to appreciate the effects of the principal remedies, and had subjected their employment to general rules, fixed and

which had baffled all the efforts of the art. Galen further relates, that being himself attacked with an inflammatory pain in the liver, he was warned in a dream of the necessity of opening the vessel situated between the thumb and index finger; and that having immediately performed this, he was completely cured. I am of opinion, however, that more reliance should be placed on the facts which this great man observed, and the deductions he drew from these whilst awake, than on the revelations he received when asleep.

We learn from mythology, that Melampus was taught the use of the rust of iron in impotency by a vulture, and that by accident he learned the virtues of hellebore in mania. At the present time vultures teach us nothing. With respect to chanee, it still continues to constitute one of our most fruitful sourees of instruction. But by its aid, those only are benefitted who observe; and he who searches the most, is always found to make the greatest number of discoveries.

The first remedies employed in the praetice of medieine, were emetics and purgatives, but more particularly those substances possessing both these qualities united; and indeed it could not have been otherwise, since their action is the most simple and evident; their effects are the most familiar to nature, and their utility or danger most cognizable to the senses.

constant. They were aware that in one case these substances would act in one way, and differently in another—they were, especially, convinced that these remedies could produce their effects on the body, through the medium only of the living principle by which it is animated—that art does not operate on dead matter; and, finally, that it was dangerous to stop, derange or change the movements of nature, unless by means of nature herself.

Such was the state of the science of medicine at the period during which Hippocrates flourished. The writings attributed to this extraordinary man, present us at times with models of the art of observing and describing diseases; at others, the general results deduced from a knowledge of them or of their diagnoses and of the curative indications—results in which we can easily discover all the fundamental truths, extended views, and even the germs of those important discoveries of modern times. In those writings we find that, with a limited *materia medica*, Hippocrates was enabled to achieve much; and his success is without doubt to be ascribed to the great order which he constantly observed in the acquirement or arrangement of knowledge—to the manner in which he observed and deduced his indications—and finally to the method by which he was directed in forming his opinions, and establishing his curative plans.

Although I do not intend to draw any conclusions from all the preceding remarks, still the reader will be better able to determine whether or not the reproaches alleged against the certainty of medicine, can with any possibility of success be refuted. I shall now examine these in detail, and weigh with impartiality the arguments advanced in their support. I am far from undertaking this examination with the view of supporting favourite prepossessions; my object is the discovery of truth, which, outliving all human opinions, will forever constitute the only subject at all worthy of investigation, and of an honourable defence.

## SECTION III.

*Examination of the first objection.*

It is certain that the principle by which all animated bodies are moved, and the circumstances which more immediately serve to modify the influence it exercises over the different organs of the body, are equally placed beyond the reach of our researches, and totally unknown to us. It is indeed evident, that if the basis of the healing art rests on a knowledge of these phenomenon, the art itself must be viewed as deficient in its fundamental principles. The question, therefore, is reduced to this: whether or not it be necessary or even advantageous, to discover the essence of the vital principle, and to form a precise idea of the manner in which it operates on the body.

Man knows the essence of nothing—neither of matter which is constantly before his eyes, nor of the secret principle by which it is modified, and which determines all the phenomena of the universe. He speaks often of causes, which, he flatters himself, he has discovered, and of those which he laments his inability to discover. But of *true* or *first causes*, he remains as ignorant as he is of the essence of matter. He sees effects, or rather receives impressions—he observes the relations, existing, either between objects to which he refers these impressions, or between those objects and himself, and constantly endeavours to discover new relations.\* He arranges them in order to fix their recollection in his mind, to appreciate them better, and draw from them all that may conduce to his preservation, or afford him additional enjoyments: this is the extent of his researches, *and this is all*. When

\* When we explain a fact by means of the relation it bears to another, we do not discover its cause. Whenever the two facts are identical, we, by so doing, reduce them to one; when simply analogous, we show their points of resemblance.

we examine these supposed *causes*, the knowledge of which serves to excite his vanity, we discover them all to be nothing more than facts. Whenever two facts follow each other, the former is regarded as the cause of the other. This latter can likewise constitute the cause of a third fact which follows: in a similar manner, until you arrive at the spontaneous principle\* which serves to move the whole of the universe (or each of its constituent parts) you may discover a fact to have always preceded your cause. Now this spontaneous principle is the only true cause; in itself it contains all others; and its nature, as well as its peculiar modes of operating, are equally beyond the reach of our feeble understanding. In vain do we attempt to remove the clouds by which they are obscured: our efforts serve only to render them still more impenetrable. We can discover nothing but mere phantoms, whilst the real object of our researches eluding our utmost endeavours, veils itself and disappears in proportion as we imagine ourselves nearest to its attainment.

We are consequently, from the very nature of things, or rather from our own, unable to apprehend this first cause, which among philosophers of all ages has constituted an object of hopeless investigation. We can faintly discover it disguised under a thousand different forms; but it continues to baffle our researches. In the three kingdoms of nature, in the regular march of celestial bodies, and even in the properties of the molecules, in appearance the most inert; in all these, I repeat, the existence of this principle becomes evident to our

\* This power is nothing more than the general moving principle, the active power, which by different nations has been personified and has received various names; but of which it is impossible to form any other idea than that resulting from the various phenomena of the universe. I have called it *spontaneous*, not that I intend by this appellation to express its nature; but because this word seems to me to convey an idea of the impression it causes on the limited intelligence of man, who sees its constant and ever self-renewed activity.

senses. Nevertheless, in all this, what do we perceive, independently of those properties themselves—the regularity of this march—the order and relations of these phenomena?

It remains now to be ascertained how far the knowledge of the *first causes*, in the pursuits of which so many profound lucubrations and so much labour have been uselessly employed, is, in reality, applicable to the wants of mankind. For the purpose of observing the regular order manifested in the progress of tides—in order to apply this knowledge to the direction of vessels navigating up and down or along dangerous coasts, is it necessary that man should know by what power the ocean is balanced, and by virtue of what primitive law this power is made to observe so much regularity? Is he moreover obliged to ascertain the cause of the affinities existing between bodies, of their elasticity and cohesion, for the purpose of performing, either in chemistry or natural philosophy, all the operations founded on those properties? Is it indispensably requisite that he should extort from nature the secret of the life, instinct, or peculiar inclinations, of vegetables, before agriculture can be invented or improved? Surely such propositions cannot be asserted. Man is allowed to observe facts; this is sufficient for him. As it is necessary that he should examine objects in respect only to the degree of relation they bear to him; and as in those relations he finds the surest means of discovering all that may tend to his interest, it naturally follows that those objects which elude his investigations, are so much the less necessary to be understood by him, as they are more remotely situated from the reach of his understanding, and that in reality the knowledge of those things which can be learned by a proper employment of his faculties, is alone necessary.

The nature of causation is therefore concealed in mystery. But from observation I perceive that every thing in nature observes a regular and constant mode of operation; that under exactly similar circumstances, facts are always similar; that

whenever they are made to differ, this difference depends on some changes produced in facts from which they derive their origin, or else on those which, being simultaneous, hold with them an intimate degree of relation. .

Of the cause of digestion I am entirely ignorant: I mean of that cause by the action of which the nerves of the stomach occasion in the gastric fluids the faculty of dissolving certain aliments; and which, by the effect of circumstances, whose actions operate on the nervous system, as, for example, certain affections of the mind, deprive those very fluids of this same faculty. I am ignorant of this, and will probably for ever remain so. In like manner, I am far from knowing the manner in which substances possessing properties the most diversified, are, by the action of the stomach and intestines, converted into a white and homogeneous fluid called *chyle*—in what manner by the pulsation of the vessels—by the intermixture of the oxygen of the air absorbed in the lungs—by the impressions of life in all the various organs of the body, this fluid is by degrees endowed with vitality, and rendered adequate to the repair of losses sustained by the solids, and those occasioned in the fluids, by the functions of health. But although ignorant of these facts, I am nevertheless led by instinctive wishes, to a desire of such substances as are capable of affording me nourishment. By constant tastes I am directed to those which have most frequently proved beneficial. I perceive that by different aliments different impressions are made on my system, and that their effects are also very various. By some the bowels are loosened, by others alvine evacuations are prevented. Some introduce into the system at large, a sensation of calmness and coolness, whilst others, on the contrary, occasion an increase in the natural heat, give greater activity to the whole economy, and produce, in a given space of time, in each organ, a more extensive share of action. Some afford, in a small bulk, sufficient nourishment, requiring, at the same time, a greater or less activity in

the functions of my stomach. In some instances, by an absence of those phenomena which usually accompany the process of digestion, I am not made sensible of the performance of this function, whilst in others it occasions in the system a true fever. Many of these substances support the strength of my economy, only when taken in excess, and their transformation into chyle is more or less painful and slow. Finally, I perceive that by means of aliments, several important modifications, varying in different individuals, in different cases, and at different times, are likely to be occasioned in the living machine. When I compare myself with other men, I discover, that among the various effects produced by those substances on my system, many are common to the human species; and that those which appear peculiar to myself, owe their peculiarity to my age—temperament—to the climate in which I live, and to my present state of health, when using them. From such comparisons—from a combination of all these observations, and, if possible, from the experience of mankind, I deduce dietetic rules, similar, for example, to those for which we are indebted to the genius of Hippocrates. Now, let me ask whether I have followed the path which naturally leads to the discovery of truth, and whether those precepts are founded on principles of sound reasoning. Shall I in this be contradicted by those philosophers, who, opposing, as they do, medicine, recommend a constant attention to natural appetites, advise us to be guided by the effects of aliments, and who commend so highly, and so deservedly, the powerful influence of regimen?\*

\* Although some patients recover without physicians, they nevertheless are seldom cured without medicine. They have done certain things, and avoided others. If they have followed precepts, these precepts are those of art; if, on the contrary, they have abandoned themselves blindly to their good fortune, this latter has snatched them from danger, in approaching itself to the precepts of medicine. In regimen, as well as in employment of medicines, we may follow methods, either useful or pernicious; but in both we discover proofs of the solidity of the art. The latter do harm by

The science of medicine, however, rests on the same foundation as dietetics; the objects for observation are of the same nature; and the method we must follow, in order to deduce from them practical conclusions, is precisely similar. He who discovers in the one proofs of certainty, cannot consider the other as resting on hypothesis, the offspring of the imagination. The inconsiderable changes, moreover, which are occasioned in a healthy body, and the new actions produced at each moment, by the exercise of life, are less manifest than those signs by which diseases are rendered evident to our senses. The effects produced by remedies, are with more facility recognised than those arising from alimentary substances, since these latter only act insensibly, and produce no well defined alterations in the system, whilst the former, occasioning a sudden change in the order and nature of the organic movements, manifest their action by some striking phenomenon.

Let me likewise inquire whether it is not from medicine that we have derived dietetics? Or whether, even supposing the first inquirers to have directed their investigations to the effects of aliment, and not to the nature of diseases, (which is in absolute contradiction with facts, and greatly in opposition with the order which man, from his wants, must have observed in the progress of his researches) whether, I repeat, it was natural in them to limit their inquiries to the mode of preserving health, so little valued when in our possession, and not extend them to the method best calculated for the removal of those maladies, which by so many and painful sensations, lead us incessantly to the observation of their causes and modes of cure, and force us to seek succour from all surrounding objects?

unprincipled employment; the former, on the contrary, succeed, because they are used properly. Now as what is useful is very distinct from what does harm, I draw the conclusion that the art exists; since in order that it should not exist, it is necessary that the useful and pernicious should be confounded.

This surely was not regarded as the true march of observation. It was only after noticing a long time the effects produced in a diseased condition of the system, by certain nutritive substances, that attention was directed to a methodical observation of those they occasion in health, or in a state approaching to it. Their effects in the first of these cases were more evident to the senses, because that state was itself more manifest; in the latter they were less evident, because that state was not at all so. Facts, in themselves of a striking nature, were first observed; the others were seen afterwards.—Such is the natural progress of things.

Medicine therefore preceded dietetics; and this latter is merely a product or part of the former. I consequently repeat it, the subjects of research in both are analogous, and frequently the same; the conclusions drawn from them are founded on the same principles of reasoning. The science of dietetics, in order to observe those facts which relate to digestion, does not necessitate a knowledge of the causes of that function; nor is it at all requisite that we should be acquainted with the causes of life, to ascertain the deviations to which their action may be liable, or to study the means best calculated to return it to its natural condition. The phenomena of health or of disease—the effects of aliments or of remedies, are all within the cognizance of our senses, and from them we draw rules necessary in the practice of the art.

The first objection adduced against the certainty of medicine, is consequently of no weight; since an ignorance of causes is not peculiar to our art, and were it sufficient to cause it to be viewed with some degree of truth, as uncertain and conjectural, this reproach ought of necessity to throw a similar degree of scepticism on the principles of almost all sciences.

## SECTION IV.

*Examination of the second objection.\**

In answering to the preceding objection, I have offered an indirect answer to the second, which is in effect a mere repetition of the former—presented under a different garb, and in other words. I would here inquire what is meant by the nature and proximate causes of disease? We are acquainted with their nature, so far as this latter can be manifested to us by facts. We know, for example, that fever produces various changes, or rather that by these changes, it is made known to us, and ascertained to exist. When a man coughs, expectorates blood, breathes with difficulty, complains of pain in the side, and has, in addition to these symptoms, a harder and quicker pulse, and a warmer skin than in the natural state, we conclude that he labours under *pleurisy*. But should you ask what is a pleurisy—you will be told that it is a disease in which all, or several of these circumstances are combined. If one or more of these be wanting, it is not pleurisy, at least not the true and essential pleurisy of the schools. It is therefore the concurrence of these many accidents which constitutes the disease. The word *pleurisy* only exhibits them in a more abridged form. The word is not a distinct being by itself; it expresses an abstract idea, and recalls by a single character all the images of a large picture.

When, therefore, not contented with knowing a disease by what it presents to our senses, by that which alone constitutes it, and without which it could not exist, you inquire what is its real nature, what is its essence—you do little more than if you asked what is the real nature or essence of a word, of a simple abstraction. It is far then, from being correct to

\* This second objection is derived from our ignorance of the nature and proximate causes of diseases.

maintain, with an air of triumph, that physicians are ignorant even of the nature of fever, and that they continually act under circumstances, and employ agents, with the nature of which they are not acquainted.

With regard to the proximate causes of diseases, which are in like manner said to be unknown to physicians, the question appears to me not more difficult to be simplified than the preceding. By this word is it intended to express the causes which render man, in a particular case, susceptible of experiencing peculiar changes in the functions of life? I answer that these are altogether unknown to us, because they are of the same nature with those, through the agency of which we live. But is the word made use of in order to express only facts which are connected with the disease, make part of its history, and can afford some indications for its treatment? I answer that these causes are within the domain of observation: they may be seen or touched, they may be learned by faithful histories, and as they constantly give rise to certain phenomena in the animal economy, (since, were they not productive of any they would merit no attention) it is in these phenomena themselves we must endeavour to discover them. It is in their own effects that we must endeavour to seek them.

Among the Greeks the empire of medicine was for a long time divided by two principal sects. The Dogmatics maintained that the ignorance of causes, forces the science to wander in its march, and introduces in the methods of cure a great degree of uncertainty. As all diseases, they said, differ with respect to their causes, it becomes absolutely necessary to understand them thoroughly, in order to make a judicious application of remedies. The Empirics, on the other hand, maintained, that a knowledge of *causes* is not within reach of our senses, whilst facts offer themselves easily to our investigation. According to this school, it is sufficient for us to

know all the circumstances constituting a disease, which are to be learned from observation, or a faithful description.

When, said the Dogmatics, you are called to a man who has been bitten by a dog, you inquire whether or not the animal was mad; because in both these cases the treatment is not the same; the knowledge of causes is consequently indispensable. To this the Empirics reply, that it is far from being indifferent whether the bite be made by a healthy or mad dog, but that in this case there is no question about causes; this circumstance is a simple fact appertaining essentially to the history of the disease, and without which this history would *not be complete*.

From this it would appear evident that their dispute was merely a dispute of words, and that both parties were in the right, according to the sense in which they understood them. That employed by the Empirics was, according to me, the most correct; that of the Dogmatics, the most usually admitted in common language.

But to what extent should we carry the investigation of causes, comprising under that generic term, those which the ancients called *hidden*, as well as those they distinguished by the name of *evident causes*. The answer is easy, and may be viewed as a natural consequence of the preceding observations, the knowledge of which is required for the purpose of completing the history of the disease, or which necessitate some modifications in the treatment, are recognized, either of themselves, or by the effects they produce—they all enter within the sphere of observations. It would undoubtedly be dangerous to remain ignorant of them; and they can at all times be discovered. In respect, however, to the other causes, the utmost indifference is required, and we should never depart from that fundamental axiom, which teaches that the farther they are placed beyond the reach of our researches, the less necessary it is to understand them. I must here beg indulgence for some of the repetitions I have been under the

necessity of making. I endeavour to condense my observations; but it is at the same time of much greater importance to be explicit and clear; and when we examine in succession, different objections which are fundamentally the same, we are often compelled to lead the reader frequently to a common truth, by which they are all equally refuted.

## SECTION V.

*Examination of the third objection.*

Every physician who reflects on and appreciates the true difficulties of his art, will acknowledge that this third objection\* is of much greater force than those which precede. Diseases are very various, and susceptible of infinite complication. Age, sex, climate, season, the character of the reigning epidemic—all these, together with other circumstances, in some measure not appreciable to the senses, may at different times cause them to undergo many modifications—give to their phenomena a new aspect—compel them to assume a different order of succession—and finally lead to other critical terminations. Semeiotica, or the science of appreciating the different states of the animal economy, by their characteristic signs, is, without doubt, the most difficult, as well as important branch of medicine. We are continually obliged to admit exceptions to those rules which were thought adequate to our guidance. We discover nothing fixed and invariable in their application, or in the plans they should furnish us for our conduct. With the exception, therefore, of some principles, which, in consequence of their very general nature, are little calculated to direct us in the detail of every particular circumstance, it seems as if the theoretical knowledge of a physician was reduced to nothing at the bed side of the sick, and that his practical skill resides entirely in a sort of instinctive acuteness, improved by habit and experience. It is confessedly by identifying himself with a patient, and partaking, as it were, of his sufferings, through the medium of the sudden play of a feeling imagination, that a physician is enabled to discover the disease at a single glance, and to seize at once all its va-

\* It is founded on the great difficulty of acquiring precise notions of disease, and ascertaining the effects produced by remedies.

rious and characteristic features. He thus himself participates to a certain extent in the influence of all these impressions, and this instinct causes him to feel, rather than foresee, the utility of certain remedies with the effects of which he is already acquainted. This mode of investigation would undoubtedly seem to promise little certainty in its results. It is widely different from that employed by the geometrician, and at first sight would appear to be in direct opposition to that of the strict logician who proceeds step by step from proposition to proposition. Now, if in the mathematical sciences, the slightest deviation from the accurate construction and employment of rules, leads us inevitably to the most incorrect results, shall we ever be enabled to avoid errors in an art, the successes of which depend exclusively on the acuteness of our organs, and in which the most happy views are less the effects of reasoning than of inspiration? This, confessedly, would appear difficult, though not impossible; or at least such is my candid opinion.

I am far from regarding it as absolutely impossible to form some just idea of the many modifications of which diseases are susceptible; distinguish the causes to which they may be referred, and ascertain the best method of describing them. For by what have we been led to suspect or be assured of their existence? By what method have we traced them to their origin? Or in other words, in what manner have we discovered that they arose from such or such circumstances? Is it not to observation that we are indebted for these first important steps? May not observation then complete what it has commenced? Why should we not be enabled, with its help, to arrange systematically all these different series of facts, which are already regarded as distinct from each other, merely because they have been, at least sometimes, really discriminated.

We suppose diseases to differ from each other in their causes, because we find them to vary in their phenomena.

Were these phenomena in all cases the same; were all diseases cured by the same crises, or by means of the same remedies, who would ever have imagined that by many and various circumstances, they could be influenced or modified? We cannot suspect the operation of causes, when we discover no effects; or rather, these latter having no existence, the former cannot be supposed to occur.

Observation, however, makes us perceive the existence of differences among the various diseases; it discovers these differences, like all the various phenomena in nature, obeying certain laws, and shows us that the changes occasioned in all living beings, by diseases, are in constant relation with certain anterior or present facts. We may therefore determine these degrees of relation, or the combination of effects, with what are denominated causes—this it teaches us; since, whenever we observe a fact, we can find that another has preceded. By means of observation, then, we are enabled to ascertain whether the one depends on, follows, or merely accompanies the other. And, on the contrary, when we discover the cause, we easily foresee the effect which will follow. With the aid of observation, therefore, we shall be enabled to appreciate the degree of influence exercised by all the various circumstances, in reality possessing some; to reduce this knowledge to fixed principles—to render it more exact and methodical, and finally, by the frequent examination and application of it, make it more familiar to the mind.

Let us examine, unbiassed by prejudice, the labours of the true interpreters of nature—of those men who have plainly described and arranged facts, and who, without ever forcing or disguising their true sense, have reduced them to a more abridged form, and we shall discover, that guided by observation, it is not only possible to possess the knowledge we have above alluded to, but that it has already been acquired by many. Inquire into the spirit in which they have observed, assimilated, discriminated, and classed diseases, either

according to the phenomena they present, or the causes by which they are modified—Examine, for example, in relation to epidemics, the researches and general views of Hippocrates, Ballonius, Sydenham, Ramazzini, Dehaen, Stork, Stoll, &c. &c. But why need I mention so many authors, the writings themselves, of Hippocrates, enable us to pronounce on this point. Examine his admirable views on the diseases of ages, sexes, climates, and seasons—compare them with nature, such as she manifests herself daily to an attentive observer—let a physician do this, and I do not hesitate to affirm, that the medical art has so much the less to fear from the result of such an examination, as it will be more deliberate, judicious, and severe without partiality.

Man finds himself thrown, as if by chance, amid the scenes of this world. Objects are continually passing before his eyes, and it is only by their differences or analogies that they strike his senses—by comparing them with each other, and with himself, he becomes acquainted with them, and by comparing himself with them, he finally learns to appreciate himself. Were he to see those objects in an isolated state, and not discover any degree of relation to exist between him and them, and vice versa, he would undoubtedly remain unacquainted with them. Were he never to perceive any surrounding object, and thereby be unable to compare himself with it, he would forever remain ignorant of himself, or rather he would not exist, since no external impression would remind him of his own existence. It has consequently been the will of nature, that the source of our knowledge should be the same with that of life itself. It is of absolute necessity to receive impressions from external agents, in order to live, or to learn; and since the necessity of studying those objects remains at all times in direct ratio to the force of their action upon us, it naturally follows that the means we possess for acquiring knowledge, are always proportioned to our wants. This principle, which in general must be regarded as true, is more especially so,

when applied to those objects entering within the domain of medicine—though particularly to that forming the subject of the present examination. Thus, the various modifications of which diseases are susceptible, are important to be learned, merely because they derange the order of their phenomena; but this renders them remarkable, and their description becomes so much the more distinct, as it is more essential to avoid confounding them.

But from the variety of existing diseases, and their many complications, does it not naturally follow, that to acquire a precise knowledge of them, is beyond the reach of possibility? Can it appear reasonable to suppose, that a man, even allowing him to possess the strongest mind, and a most extensive memory, can ever be enabled to retain a recollection of so many and diversified objects? To retain and fix them in our minds, it is indispensably necessary that we should be able to refer them to a certain number of general principles; and it is this that renders systems, viewed in the light of methodical arrangements, absolutely unavoidable. But the errors to which all arbitrary and premature classifications can lead us, have been well appreciated. In medicine, the danger was, perhaps, greater than in any of the other sciences. Consequently, it was thought necessary, by the most intelligent minds, to continue for a long time to examine each disease, as an individual being, distinct from all others, and that we should endeavour to repeat and multiply our remarks and experiments, ere we could establish general principles applicable to all cases. They have maintained, for example, that it was absurd to range under the general denomination of phthisis, diseases differing greatly from each other, as well with respect to their causes and symptoms, as in the treatment they require—that there exists, perhaps, no two cases of phthisis presenting the same train of symptoms; consequently, that we must content ourselves with describing each particular case, and note its proper genius and characteristic phenomena.

Finally, some men, possessing eminent talents, have maintained that this sort of empiricism, deprived as it is, not only of all hypothesis, but likewise of all method of assembling facts, and tracing indications for remedies, too exclusive in its nature, can alone lead us to the discovery of useful truths.

Nosologists, such as Sauvages, Linneus, Sagar, Vogel, and Cullen himself, in referring all diseases to some of their principal divisions, and in arranging them into families, as was done by botanists with respect to plants, have formed tables more proper to aid the memory of a batchelor defending his theses, than to show to the practitioner the order in which he must arrange his acquirements, and deduce his curative plans. In their attempts to say all, they have lost themselves in futile and unnecessary details—they have multiplied to excess their classes and species, and the more perfection they could have given to this plan, the nearer they would have approached to the simple individual descriptions. When, as was done by Cullen, they have disregarded symptomatic or disguised diseases, the treatment of which must differ from that required by the malady they imitate, they have left considerable deficiencies in their classifications, and have been forced to regard as incorrect, a number of valuable observations. The science, therefore, instead of receiving from their labours any degree of improvement, has, on the contrary, retrograded. In the hope of supplying the deficiencies which continue to exist even in the most complete assemblage of medical facts, by referring them all to general principles—they have extinguished, in their readers, the true spirit of observation; and the practice which naturally results from their method of viewing the animal economy, is, for the most part, pitiful, weak, and sometimes even erroneous.

But were it true that each disease differs essentially from all others—were it not possible to be guided in the study of it by some general principles—were we not capable of foreseeing its progress and crises, and to oppose to these a sure

and appropriate method of cure; then it woud be evident that we could not form, of that disease, any precise and complete idea before it had progressed through its different stages, and that at this period only, or in other words, when it would be too late, we would have it in our power to administer to our patients the different remedies required by the indications of his case; in other words, the medical art would have no existence. Those, however, who oppose with the greatest warmth nosological systems, are very far from drawing these conclusions. The sort of empericism they profess to support, lends, on the contrary, to medicine, an immense degree of force. By them, the most energetic remedies are employed with remarkable boldness—they place less dependence on the curative efforts of nature—and in avoiding all those futile and even dangerous hypotheses, which only serve to enervate and corrupt the practice, they reap the fruits of the courageous and prudent application which they daily make of these energetic remedies. They are, in consequence, guided by principles—since, without these, they could not predict that mercury will arrest the progress of a venereal ulcer, or the Peruvian bark the paroxysms of an obstinate fever.

On the other hand, we should labour under a mistake, did we entertain the belief that nosologists and their partisans are always divided in their practice by those ingenious, though erroneous classifications. The study of diseases very soon disgusts them with an artificial method, the practical application of which is sometimes impossible, for the most part embarrassing, and very often hazardous.

From these circumstances, it naturally follows, that the nosologist and the empirical philosopher, when equally possessed of talents, follow, in the investigation of diseases, paths not so widely different, as might, at first, be imagined. Nature leads them both, as it were, by the hand. She discovers to them objects in their true light, fixes their recollection firmly in their minds, and there classes them by their analogies, or

by the differences existing between them. She establishes for them, and sometimes without their knowledge, those fundamental and general principles which are to serve them as guides. This method of nature is as simple as it is extensive in its application and fruitful in its results. Evidences of it are found contained in the writings of all good practitioners, and by it alone they have been made deserving of this title. Many, it is true, have followed it by mere instinct, but in perusing their works, we discover in almost every page, that to it all their successes are naturally to be referred.

It would indeed appear presumption in us, to imagine, that so many strong minded men, who have constantly adhered to this method, had for ever remained ignorant of it. But, although we discover even in the most erroneous hypotheses, evidences of its existence, to which, perhaps, they are indebted for the ephemeral celebrity which they have enjoyed, no one, so far as I am informed, has as yet developed it in a manner satisfactory and complete. I shall, consequently, endeavour to point out its mechanism, and reserve a more extensive detail of its principles for a general treatise on nosology, *materia medica*, and therapeutics, of which this method will be made the common foundation.

When we investigate diseases with regard to their causes, and the degree of analogy, relation, and danger of their symptoms—in other words, when we examine them in their tout ensemble, and under all points of view, they are always found to differ from each other. No two cases of catarrh, or of simple ephemeral fever, are discovered to be alike—there exist between them, as between physiognomies, the most similar in appearance, features or shades by which they are rendered distinguishable. Now, since the slightest modifications in their character occasions analogous changes in their treatment, it naturally follows that we must study each case individually, in order that we may deduce, from the combination, or relation of its many phenomena, a rational plan of conduct; in a

similar way that we endeavour to discover the true sense of an enigma in each proposition of which it is composed, as well as in their union, and mutual relationship. In order, therefore, to understand any disease accurately, it is absolutely necessary to know the precise value of all its different phenomena; and likewise to know, whether in each new combination, they are not so greatly modified as to resist the employment of those remedies by which, when isolated, or in different combinations, they were victoriously combatted. For, without a knowledge of these facts, the science of medicine would undoubtedly float, as it were, without compass, in a sea of uncertainty.

When men observe an object for the first time, they note its most striking circumstances—they compare them with each other, and place on the same line all those that present some degree of resemblance.

New observations discover to them new facts, of a less important nature, and which, like the former, are found linked together by an analogous degree of relation. Soon it is found that they can all be variously arranged, combined, or blended; and finally, that in all the objects of our researches, all particular facts, however numerous and various, are all to be traced to a small number of common facts or phenomena. It is thus that in singing or in speaking, a limited number of sounds are sufficient for the purpose of expressing all the various affections of the soul—that the limited means by which the organs of the mouth change into definite language the sounds escaping from the larynx, give to the expressions of feeling the precise intention of the mind; for all those modifications, designated by grammarians under the title of consonants, are very limited in their number. It is likewise in this way that a few signs are sufficient to present in writing the richness of all the different idioms, or the illusions of the most scientific music.

The older rhetoricians, in noting with care all the circum-

stances capable of seducing, agitating, or convincing in speech, in images, or in the form of reasoning, were soon convinced that these beauties, or rather the means by which they are produced, are far from being as numerous as at first sight they would seem to be, and that by uniting under the same title all those that resemble each other, they are all reducible to a very limited number of heads, or of common results. Now these results, or those rules which they serve to explain, are like the secret or magic resources of eloquence and poetry; with this peculiarity, however, that they possess no power unless when placed in the hands of magicians.

The preceding remarks are equally applicable to those objects which the study of diseases presents to our minds. Each new case is at first believed to present new facts—but these, however, are only new combinations or shades of the same circumstances.

In the morbid state, the principal phenomena are but few—the others resulting all from the combination and from the different degrees of intensity of the former. The order in which they appear, their various degree of importance and relation, are sufficient to give rise to all the varieties of diseases.

From the most trifling to the most excruciating pain, from the slightest to the most complicated disease, or from the ephemeral to the pestilential fever, we discover the same general forms, features, and colourings to exist.

It is from their union, from their dissimilar or combined features, and likewise from their analogy or contrast, that nature produces the great multitude of diseases, which, at first sight, appear so different from each other; in the same manner that a few signs are sufficient to expose to the eye all the beauties of the musical genius, or present to us all the wonderful complications of language.

This symptomatic method is the work of nature herself, and void of that arbitrary sway exercised by factitious systems. It serves to simplify the study of diseases, as well as

their history and their treatment. It does not prevent us from studying the proper genius of those possessed of any; nor from investigating the peculiar effects of specific remedies, which, by the way, are smaller in number than is generally believed; but, on the contrary, it lends support to our memory, without, however, misleading our judgment, and proves to be no less a sure guide in the practice of medicine, than a natural method of combining the knowledge of its different branches. The more widely we depart from it, the more we are misled, whilst on the contrary, our successes are multiplied in proportion as we adhere closely to its directions. This we learn from the results of daily observations, and from an attentive study of the practical writers of all ages.

The third objection, consequently, although more plausible than those that precede, cannot, any more than them, sustain a severe examination.

## SECTION VI.

*Examination of the fourth objection.*

This objection, not meriting a detailed discussion, I shall pass it by as rapidly as I possibly can. Of what necessity in truth is it to be acquainted with the nature of remedies, in order to observe the changes they occasion in the animal economy? We are no better informed of that of aliments, and, notwithstanding this, we well know that their employment is followed by different effects, according to the circumstances under which those who take them are labouring, or according to the manner in which they are employed. From a long series of experiments, dietetic rules have been established, and are founded on a basis as solid as any in nature.

With respect to the employment and action of remedies, the method of reasoning is the same. Consequently, it is not necessary to know the peculiar nature of Peruvian bark,\* in order to observe its specific virtues in the cure of intermittent fevers, and it would probably avail us but little to ascertain that of antimony or mercury, in order to be assured, that in various modes of combination, the former excites vomiting, whilst the latter destroys the poison of Syphilis.† From re-

\* It might even be asked of the enemies of medicine, what they understand by *this unknown nature of remedies*; they would perhaps find some difficulty in giving a satisfactory answer.

† “We must deduce practical rules, not from anterior reasoning, however plausible they may seem, but from experience, guided by reason. The judgment is a kind of memory, by which all the impressions received through the medium of the senses, are assembled and arranged; for before the formation of thoughts the senses have received all that is necessary to its formation; and its materials are by them transmitted to the understanding.”—*Hippocrates*.

It was this which Aristotle has since expressed in the axiom, so much celebrated among the moderns, and so well developed in the writings of Locke, Helvetius, Bonnet, Condillac: *Nihil est in intellectu, quod pruis non*

peated experiments we may learn that in such a case, and under such circumstances, a remedy will produce such an effect; that, on the contrary, in other cases its effects are different; and that by modifying or combining it with other known remedies, new results are obtained. A knowledge of these various facts is derived from observation; and were we acquainted with the precise nature of the remedy, the facts which its employment has revealed, would prove neither more certain, nor more intimately linked together. In all experimental sciences, therefore, man, in order to establish a degree of certainty in his researches, must merely observe facts, to place them in his mind, as nearly as possible, in the same order and relation which they possess in nature, and draw from them such conclusions only as they are found to warrant.

*fuerit in sensu.* Hippocrates, in some measure, describes what Aristotle has merely expressed.

## SECTION VII.

*Examination of the fifth objection.*

The difficulties of the art, alleged in the fifth objection, are real, though not insurmountable. Hippocrates has said, with the energetic and rapid mode of expression by which he is characterised: “Life is short—art long—the occasion transitory—experience dangerous—the judgment difficult.” That experience is dangerous, I am prepared to admit. If there exists one function which requires a combination of all the eminent qualifications of the mind, it is undoubtedly that of drawing correct indications from the symptoms of a disease, to observe the effects produced by medicines, and to establish principles on which they may, in future, be prescribed with safety. But when it is said that the art is difficult; so far from denying its existence, the contrary is implicitly maintained. The same Hippocrates, in his treatise on primitive medicine, has made on this subject an observation, the most sensible, and which appears to me to reduce the question to its proper value:—“If medicine were not an art like all others, there would be neither good nor bad physicians—they would all be equally good, or rather, all equally bad.” Confessedly there cannot be found any difference between the cultivators of an art, unless the principles of that art be in nature—for in this case only can some be acquainted with them, whilst others remain in complete ignorance with regard to their existence, and when these principles are not found in nature, they are equally unknown to all.

It would be absolutely necessary, were we to attempt a detailed refutation of all the particular points presented in this fifth objection, to indulge in incessant repetitions. Already, in the course of this work, it has been answered, although not directly in all its bearings. In detailing the progressive

march of our knowledge, in pointing out the means we possess to acquire it, and the degree of relation existing between it and our wants, I believe I have given the solution, not merely of the present, but likewise of many secondary questions, with which it is intimately connected.

But, without attempting to prove a second time, that man was led, by his imperious wants, to the study of medicine, that all the objects relating to it may be brought within reach of our senses, and that its principles are the inevitable results of facts collected by means of experience; I would beg the reader to examine whether it would not be proper before he arrives, from the difficulty experienced in the application of those principles, or from their dubious consequences, to any conclusion unfavourable to medicine, to inquire if the other arts are susceptible of attaining that mathematical precision, and that degree of certainty which the former is reproached with not presenting.

With the aid of logarithmic tables, the most ignorant man may form calculations, with the mechanism of which he is totally unacquainted. This labour requires neither mind, learning nor reflection, and its success in no way depends on talents, and on nothing, except the knowledge of rules. When the enemies of medicine assert that the principles of the art rest on no solid foundation; do they mean to say, that those principles are void of that kind of certainty above alluded to? When they allege that their application is difficult, do they wish to be understood as saying that, in order to make this application with constant success, it is not sufficient to place the data of the problem in opposition to a table which offers us its ready solution? I am very distant from the belief that the particular knowledge of disease or of the effect produced by remedies, can at any period be carried to that degree of precision, by which the certainties of mathematical calculations are characterised; or from asserting that the science of prognostics is

susceptible of acquiring this same precision, in some respects purely intellectual. All that relates to the practice of medicine, confessedly requires a combination of operations very different from those, which, with the aid of a simple formula, it is easy to execute correctly. The inventors of medicine, who have opened for themselves new paths, and those philosophical minds who have been careful to arrange their observations systematically, can, in reality, notwithstanding the importance of their labours, only direct the practitioner in his researches, limit, in his eyes, the object which constitutes the subject of them, and strengthen his experience by that of the preceding ages; and perhaps as much talent is required in him, in order that he should be able to appreciate fully and follow their results, as in the former for the purpose of discovering them.

But where shall we find arts which require neither the aid of talents nor of efforts? Does there exist a single one, the successes of which may with certainty be anticipated? In rough-hewing a statue, Phidias possesses, in his mind, all the beauties which it is destined to present; still he is far from being sure that he will execute the plan he has conceived.

Homer in tracing the plan of an epic poem, or Racine of a tragedy—Pergolese, Sachini, Paesiello, Mozart, Mehul, in combining the effects which they intend to produce by a happy and scientific combination of sounds, cannot with certainty anticipate the success of their compositions. Notwithstanding their preceding successes, their eminent talents, and the most indefatigable industry, they are not rendered masters of future events, and the most sublime plan which they are capable of tracing, together with the best grounded hopes of success they may entertain, can, from innumerable circumstances, be blasted for ever.

Agriculture is an art—it possesses in nature, principles already known, or which man is endeavouring to discover. Daily

observations serve to extend its limits, and carry it to perfection. To borrow again the definition employed by Hippocrates, we will say that it is an art, because some individuals cultivate well and others improperly.

After preparing his fields, the most intelligent farmer (encouraged by the results of former experience) determines on committing his seeds to the ground—he has recourse to all the precautions and means that have proved useful in analogous cases, and is led to expect a rich harvest. During the course of a certain number of years, taken collectively, he will, undoubtedly, be more successful than his negligent neighbour. But any wagers in favour of his success in a given season, during which we even suppose he has devoted the greatest attention, would rest on mere probabilities, since frost, hail, and a number of other disastrous incidences, may prevent him from reaping the just fruits of his labours. The physician is placed under precisely similar circumstances. He recognises the disease; creates or improves the opportunity, and administers his remedy. From this moment, we must necessarily regard the cure as in some measure left to the uncertainty of fortune—or in other words, as depending on a number of new circumstances, the eventful and precise effects of which cannot in any way be anticipated.

Although, however, it is truly possible that an emetic will not excite vomiting, or a cathartic purge, nevertheless, whenever I employ them in a proper dose, and with due precaution, in a case which required their administration, I can foresee their operations, not with any degree of mathematical precision, but with moral certainty. Men are under the necessity, in the practice of life, to content themselves with these, since they are the only ones that nature admits in the practice, or in the application of reasoning to positive facts.

Among the many writers who, with the aid either of arguments or of sarcasms, have warmly opposed the certainty of

medical science, we are forced to enumerate many endowed with strong and philosophical minds, and who, owing to the many fatal prejudices they have contributed to overthrow, deserve to be ranked among the greatest benefactors of mankind. Inspired with the noble desire of giving a more sure march to the development of the human mind, and likewise of perfecting all the departments of science, they in all directions, and with the torch of truth in hand, pursued and combatted erroneous and vague ideas. And if they have viewed our art in so unfavourable a light, it is undoubtedly because they considered it as a true superstition; and their endeavours to overthrow the opinions that had at all times been entertained with respect to its power, must be attributed to the fact, that they considered them as only proper to favour public credulity, and keep up that unfortunate disposition of our mind, by which it is directed, sometimes without motive, or on the most vague suppositions. They have, however, neglected to notice, that by shaking the foundations on which medicine rests, they do the same to those of almost all the *other* sciences. For example, is it not evident, that its principles are much more certain than those of morals themselves, towards the perfection of which all their efforts were directed?

But to be more explicit, the causes of physical movements are much more regular and constant in their action, than those of moral tendencies, the signs of diseases are much more evident, less variable, and more within the reach of our senses, than those by which the affections of the mind are rendered manifest. The effects of substances that may be applied to the body are more immediate, certain, and easily appreciated, than those produced by regimen and moral remedies; or in other words, than the effect of the laws of instruction, or habit. It will always prove less difficult to establish rules in order to imitate, in analogous cases, cures of the former kind, than to repeat those of the latter. To this, I would beg

leave to add, that the intimate connection existing between the physical, and what is denominated the moral system—and likewise the dependence of the ideas or passions, in regard to the condition of the organs, on the nature of the impressions which these latter receive, prevents morals from being established on a solid basis, unless we call to their aid physiological and medical knowledge; and the moralist, before he traces his plans of cure, or his practical precepts, should never neglect to consult the physician. In many cases, a suitable regimen and proper remedies applied to the physical system, will do more towards reclaiming men to the paths of honesty or of virtue, than reasonings, exhortations, or even menaces. And if we examine the subject in a more extensive light, we will readily admit that public education, for the purpose of invigorating the soul, must tend to invigorate the body; that to regulate moral, it must regulate physical habits, and that in order to correct the passions, it must first correct the temperaments.

As I shall have occasion in another part of this essay, to return to the subject of the difficulties encountered in the practice of medicine, and which no one appreciates more than myself, I shall not at present enlarge on them.

If to what we have already said it be further added, that in the treatment of diseases there still exists many points extremely doubtful—that several of these very diseases, are, in the present state of the art, absolutely incurable,\* I will readily admit the correctness of the charge, and acknowledge that all these subjects have not been elucidated.

\* A disease is incurable merely because we do not possess the means, or instruments, necessary for its cure. This great defect, if we may consider it as such, is not peculiar to medicine, but in like manner applicable to the other arts. The smith cannot work if deprived of his furnace, of his hammer, or of his anvil; the mariner cannot make his way without rudder, sails or oars; but from this does it follow, that men are neither able to work metals, or direct themselves on the waters? When a physician has not suf-

Many morbid alterations, when they have reached a certain degree of intensity, very unfortunately baffle all the means in our possession. Several diseases, from the very length of their duration, are rendered mortal. But can it be possible that a few isolated doubts undermine, in its very foundations, such a mass of certainties? Can a few incurable diseases cause us to neglect all attempts to treat those that are curable? By means of indefatigable labour, and with time, we shall be enabled to discover facts which nature has hitherto concealed from our view, these will clear up many points which still continue to be disputable, and will perhaps afford us the means of suspending or changing, without a single exception, all the irregular movements, which supervene in the animal economy. Until we have attained this object, let us continue to enjoy the truths already in our possession—let us remain in a state of the most complete scepticism with regard to those points that are not fully established—let us endeavour to extend the limits of an art so precious to humanity; and if any of its objects resist invincibly all our researches, let us remember that a problem may be regarded as solved, whenever we discover it to be truly inexplicable.

ficient time to perceive all the features of a disease—when those by which the disease is characterised are not sufficiently known to him; or when the curative means are not within his reach, we must say that he does not possess the instruments of the art; but we cannot on this account deny the real existence, the principles and the utility of the art itself.

## SECTION VIII.

*Examination of the sixth objection.*

This objection is more within the reach of the generality of minds—it commonly makes a powerful impression, and the reason is obvious.

Medical writers are in opposition to each other with regard to the principles of the art, in a similar way that practitioners differ on the subject of their curative plans. Systems overthrown by other systems are seen to follow each other in rapid succession, and the methods of treating diseases are submitted to the same instability. This at least would seem, at first sight, to be the case, when we compare the pretensions and reports of all the various sects. Artists, it must be confessed, who do not agree respecting the fundamental principles of their art, or their proper application, are well calculated to inspire some degree of suspicion in the minds of incredulous judges. If, in many cases, it be true, that when Hippocrates says *yes*, Galen says *no*, are we not authorized to suppose the principles by which they are guided in making their observations, and in forming their judgment, rest on no solid foundation, and that consequently they are equally futile and vain? There are few intelligent minds in whom this first reflection has not served to create some degree of scepticism, and there will not be found many physicians, at least among those who are in the habit of watching over their reason and their conscience, in whom, in the beginning of their practice, an afflicting degree of uncertainty, has not caused momentary terror. But a more attentive and deliberate examination of books, and of the different methods resorted to in the treatment of disease, and especially a more profound study of nature itself, must afford us the means of overcoming these difficulties, if in reality it be possible to accomplish this object in a satisfactory manner.

In entering on this subject, I would observe, that it would be of little consequence whether theoretical opinions differed or not, resting, as they chiefly do, not on facts, but on the manner in which these are produced; provided, however, the practice were regulated on facts alone, and never disregarded the indications which they furnish. If, for example, the mathematicians, such as Pitcairn, did not adopt in the cure of a pleurisy, a method different from that employed by the solidists, such as Hoffman, or by the chemists, such as Sylvius—if these different sectarians, after learning by their personal observations, and by means of the experience of others, the constant effects of the remedies employed in analogous cases, all made use of their hypothesis, for the purpose merely of combining systematically all their ideas—if, in regulating their practical views, they were guided by experience alone, it will strike us as evident that these various sects would then differ only on points totally foreign from the true objects of the art, and that we should regard those oppositions in theory with as much indifference, as intelligent minds regard, in morals, all those various opinions which have no influence on the conduct of individuals.

If, on the contrary, each sect, not satisfied with having framed at all hazard its hypothesis with facts, attempts to cause these facts to bend to its hypothesis—if it wishes to force nature to obey the reveries of the imagination, in such a case, the fault is not to be attributed to the art itself, but referred solely to a violation of its fundamental principles. Follies and absurdities do not annihilate wisdom or reason, but on the contrary lead us to believe in their existence; for confusion implies order, in a similar manner that falsehood implies truth—since we cannot conceive of opposites unaccompanied by their opposites. Consequently, it may with justice be maintained that the art exists, for the very same reasons that others have denied

its existence: in other words, because the method of philosophising, which a spirit of system has so frequently introduced into it, differs essentially from the one calculated to lead to sure and precise conclusions, or from the *true method* of the existence of which, were it not found in nature, we could not entertain the least suspicion.\*

We must, however, avoid resting either too much or too little confidence in hypothesis. The only theory which never misleads the judgment, does not deserve, properly speaking, to receive that appellation. It never anticipates or goes beyond observation, and is, in fact, itself the observation. All other theories and facts, are arranged before hand, under some general principles, which being applicable only to a few, must, in consequence, lead us very frequently into error. They may, however, sometimes aid us in the attainment of truth, because, in their origin, the most absurd of these theories, are unquestionably founded on experiments of indisputable correctness. The great error into which the framers of these hypotheses have fallen, has been in giving to those experiments a much too extensive signification; to construct in form of a complete system, a number of facts, hardly sufficient to furnish a few isolated views. When we endeavour to explain the functions of the animal economy, with the aid of mechanical, physical or chemical laws, or else by means of some philosophical hypothesis derived from some other source than ob-

\* It is not sufficient, in order to be able to draw conclusions against the medical art, to prove that some physicians have reasoned erroneously—it would be necessary to demonstrate the impossibility of reasoning correctly, "All the arts," says Hippocrates, "are in nature; if we interrogate her properly she will reveal to us all their respective secrets, and will likewise guard us from the errors which ignorance continually introduces into them. In such a case, the art necessarily improves, but notwithstanding these defects, it existed."

servations made on the living system we discover impediments at almost every step of our progress; exceptions to the general principles we have established soon become more numerous than the facts by which these are supported—and we are forced not only to acknowledge that these hypotheses are inadequate to the task of connecting together the various fragments of the science, but likewise lead to innumerable errors in practice. Are we from these observations warranted in concluding, that in the functions of life there exists nothing either chemical, physical, or mechanical? Than this nothing would appear more irrational; and even were it correct, we believe we are safe in asserting that no one would ever have attempted to avail himself of similar explanations. By intelligent minds they are rejected, not as serving to explain nothing, but because they are inadequate to the explanation of *all* phenomena—because they are strictly applicable to those facts only from which they were derived—and if it be proved that by their most dispassionate defenders they are abandoned at the bed-side of the sick, it will at least appear probable that they are not productive of the many dangerous results naturally to be anticipated from them.

As a proof of the fact, that nature, with the aid of experience, corrects, insensibly, the errors which may exist in the principles, and that it forces practitioners, not entirely deprived of judgment and instinct, to follow a method in some measure uniform, we may alledge, notwithstanding the tone of decision with which the contrary opinion has been maintained, that the practice in all ages, is fundamentally the same. The descriptions of diseases that have been handed down to us by the ancients, are to this very period, strikingly correct—their diagnostical and prognostical rules continue to be taught in our schools—our general curative indications are precisely similar to those laid down by them, and in tracing them we have adhered to the same mode

of reasoning. From the days of Hippocrates down to the present time, his observations have received confirmation from the results of those of all accurate observers, Areteus, Alexander Trallianus, Aetius, Cœlius, Aurelianus, Celsus, Galen, continue to offer themselves to us as sure guides. The restorers of medicine in modern Europe, have followed them, step by step. Sennertus and Lomnius, have done little more than to abridge their observations, and arrange them in a more systematical order. Vallesius, Duret, Houllier, Prosper Alpinus, Ballonius, Prosper Martianus, Ferneilius, Riverius, and many more are indebted to them for all the successes they have obtained—and it is solely by having placed themselves among the disciples of these great men, that they have merited the honour of being regarded as their equals. Even at this enlightened period, when numberless labours have served to enrich the art with some discoveries of real value, physicians worthy of being compared to our first masters, have only obtained the honour of *surpassing them sometimes, by imitating them always.*

We are consequently warranted in denying the assertion which has been made, that the practice of medicine has really changed from age to age—and that good practitioners differ essentially in their views. The immense number of points in which they agree, serves not less to prove the constant regularity of nature, than the unshaken certainty of medicine. It proves the one, because it proves the other; for if under particular circumstances nature invariably gives rise to the same phenomena, and if the art, as cannot be doubted, is capable of modifying at will some of these circumstances, it naturally follows that it must possess the power of acting with efficacy on these phenomena, since they must in an equal degree depend upon it.

But let us again recur to history, and we shall find that the art has at all times been exercised by means of the same agents. Whatever epoch in the annals of medicine we ex-

amine, whatever be the sect, either ancient or modern, foreign or national, which we investigate, we discover the same general principles, the same rules, and the same plans. Practitioners of all ages,\* have opposed the lancet, and the anti-phlogistic regimen to the inflammatory condition of the system; they have constantly recommended vomits in fulness of the stomach, and purgatives in that of the intestines; they have invariably prescribed the warm bath for the purpose of remedying dryness, tension, and rigidity, whilst on the contrary, a state of relaxation and weakness they have combated by means of the cold bath and tonics. They all, in like manner, recommend evacuating from the system what is superabundant, to restore to it its deficiencies, to excite the energies of nature when languid, and to repress them, on the contrary, when too impetuous. In a word, there does not exist a disease, possessed of a genius invariably the same, which at the present time, is not treated by the same remedies, or at least by those of the same nature, as we find it to have been in former years.

The confusion which may arise, however, in regard to this subject, owes its origin to the various significations attached, by different writers, to the same words. The one for example, understands by *ardent fever* a truly inflammatory disease,† and recommends the use of the lancet; the other designates by that name a bilious disease, and proscribes all sanguine evacuations. Although they appear to contradict each other, they nevertheless agree with regard to the fundamental principles of indications—they say the same things, but in other words; differing with respect only to the particular language made use of by each. Confessedly whenever, instead of giving a name to the disease, they content them-

\* With the exception of a few moderns—we shall soon see the reason.

† The ancients regarded the inflammatory *Cerium*, as a bilious product; many moderns have confounded certain bilious fevers, with inflammatory diseases, &c. &c.

selves with describing it—whenever they endeavour to demonstrate to us, by a just estimate of symptoms, the motives which have influenced them in the adoption of their curative plans; they differ so little from each other, that an intelligent reader anticipates without difficulty not the precise formulæ, but the objects they endeavour to attain, and the peculiar nature of the means they employ. On this point, I would appeal to the testimony of all who have perused with due attention, the writings of our predecessors.

The practice of all good physicians, let me repeat, is like nature herself, uniformly the same in all ages and in all countries. It is equally, though undoubtedly not more so, because in the course of ages, diseases undergo manifest changes, and receive, in different climates, peculiar characteristics. But the medical art does not more firmly establish the solidity of its principles, by studying the march of nature in the phenomena she presents, than by endeavouring to detect her in her exceptions.

It will perhaps be objected to this, that whatever degree of importance we may attach to this method of reasoning, it cannot serve to explain those everlasting disputes, which have occasioned, at the bed side of the sick, so many scenes of a scandalous and ridiculous nature. If medical authors coincide in their writings, physicians seldom do so in conversation, and if it be possible to reconcile the former, it is assuredly impossible to attribute to the latter a similarity in their views.

If in answer to this, I merely say that it is sufficient to demonstrate the certainty of medicine, such as an attentive study of nature points it out to us, that we may moreover abandon to their own defence those who practice the art, I should have justified neither the degree of opposition discovered in those writers I have just mentioned, nor that of practitioners, against whom the whole weight of the objection is principally directed. If I add that self love, or other pas-

sions even less honourable, are the most common sources of all disputes arising among the latter, and that their personal interests mislead their judgment only after corrupting their consciences, I should adopt a method still less calculated to justify them, and would thus judge them in a manner, as unworthy of myself, as of a body of men the most respectable and scientific perhaps of any that has ever existed.\*

Physicians are assuredly not all greedy mountebanks, having recourse to all possible means of enhancing the virtues of their particular drugs, and depreciating those offered up for sale by their neighbours; no; honesty, candour, the love of truth, and of the human species to the painful service of which they are devoted by their profession—all the affections of a feeling mind, and likewise all the duties of an honest man—all these I repeat are not strangers to their heart. Many, among them, practice in silence, the many painful virtues of their profession. They judge themselves with severity, and their fellow practitioners with indulgence. They oppose all hazardous opinions, not because their opinions have originated with others, but because they view them as dangerous. They conciliate all which, without prejudice to their patients, can be conciliated; and if they raise with warmth their voice against ignorance or craftiness, it is a sacred duty which, though reluctantly, they perform. The charge alleged against them of endeavouring only to contradict each other, and that peace is forever expelled from their discussions, should be regarded as so much the more unjust, as it is made more general. Physicians have at all periods been found, and many are still to be met with in all parts of the world, who mutually excite each other, by noble examples, to the performance of good actions—who encourage each other in their labours, and unite, for the good of

\* It would be the greatest absurdity, to assert that there are no empirics among physicians—but it is still more unjust to maintain that the greater number of physicians are empirics.

humanity, all the knowledge which they have been able to acquire.

But without entering here into an unnecessary examination of this objection, a direct answer to it can without difficulty be presented. Whenever two physicians adopt contradictory views, and recommend the employment of remedies of a nature diametrically opposed, it is concluded, though improperly, that one of them is necessarily in the wrong. Although entertaining different opinions, they nevertheless may both be in the right, and employ very different means to arrive at the same end. Their unanimity could no more serve to substantiate the correctness of their views, than their opposition indicate them to be in the wrong. But this requires some elucidation.

Nature, in every disease, employs a certain combination of movements in order to change the morbid condition of the system, and to return this latter to a state of health. These movements are, for the most part, the most appropriate, and when at perfect liberty in her choice, she effects them as we have already seen, in preference to all others. Whenever nature finds that the crisis cannot be accomplished by one emunctory, she endeavours to perform it by another. Thus she attempts by the skin, what she has not been able to do by the bowels or kidneys. All evacuations have their substitutes—and there does not exist perhaps a single one of them which may not at times be found preferable to all others. Now whenever the critical termination of the disease is to undergo some change, it naturally follows that the efforts by which it is accomplished, and the order in which these latter are linked together, must in consequence undergo some analogous modifications. Nature, therefore, can employ in almost every instance several distinct means for the accomplishment of the same end. I have already presented pleurisy as an example—and the same may be said of inflammatory fevers, which are some-

times cured by means of hemorrhages from the nose; at others, by perspiration, or by bilious diarrhoeas—whilst in many cases they terminate by a febrile movement or by a critical bilious suffusion.

Spasmodic diseases are rarely susceptible of a complete solution—nevertheless, in these, the *vis medicatrix* does not remain in absolute inaction. The hemorrhoidal discharge, certain salutary fevers, and other maladies of a more regular nature, and more capable of undergoing a good crisis, are the various resources which this principle seems to reserve to itself in obstinate cases, and to which it has recourse whenever it is unable to attain its object by more efficient means. In some of these instances the *vis medicatrix* employs convulsive movements more or less violent. This latter means is in truth of a precarious and dangerous nature—it succeeds but seldom. In most instances, it even aggravates the symptoms,—and renders mortal those diseases in which the nerves and brain are more essentially affected. This, however, does not in the least degree invalidate the truth of the general proposition I have advanced—and consequently it is very certain that physicians, though not ceasing to imitate nature, can follow very different indications, and adopt various curative plans.

Although bleeding and the antiphlogistic regimen be admirably well adapted to the treatment of inflammatory diseases, nevertheless, Van Helmont and Lobb, by means of sudorifics, succeeded in effecting many astonishing cures. In the treatment of nervous diseases, Sydenham employed chalybeates, Hoffman the antispasmodics and foetid gunis, Boerhaave saponaceous and dissolvent remedies, Robert Whitt stomachics, Peruvian bark, and bitters, Poinene, diluents, tepid and cold baths; whilst Barthin\* treated these

\* This professor possessing great erudition and genius has developed his principal views, in an extremely original work, which in some parts is not quite as lucid as we might desire, but it merits a more brilliant success, and sooner or later will obtain it.

maladies by his perturbatory method, (*methode perturbatrice*), or in other words by the alternate employment of anodynes, excitants, and tonics—the Staalhians used mild astringents, but more especially aloetics in order to promote hemorrhoides, which they regard as the most beneficial crisis occurring during manhood or even old age.

Each of these practitioners cites facts in support of his views and method: many describe them with a degree of sincerity which prevents us from entertaining any doubt of their veracity; and they further adduce new and numerous experiments in confirmation of their results. And although it would be absurd to conclude that these various means may be indiscriminately used in every case, and are equally well suited to all circumstances; nevertheless, we can from this conclude that the vital energies are capable of compensating for this want of precision, common in all our curative plans, and, like an expert workman, employ in the most appropriate manner the tools that are offered to them.

Again through the influence of the art, we are enabled to substitute a speedy crisis, to those tedious and often uncertain efforts of nature, to compel her, by means of violent concussions, to bring within a short space of time, attempts which she makes at long intervals—and even, in some instances, to command the occurrence of certain vital actions, which, when abandoned to herself, she is unable to perform. In this way it is that copious bleedings, to use the expression of Galen, *strangle* from their very commencement certain dangerous fevers: it is likewise on similar principles, that emetics, but more particularly antimonials, remove pleuritic and rheumatick pains, many species of ophthalmia, and sore throats, and arrest, as if by enchantment, certain species of violent mania, and even some uterine hemorrhagies.

Every physician bearing in mind the objects which he has himself seen and verified, and placing with reason, confidence in those remedies, the virtues of which he has recog-

nized, employs them, at every repetition of similar cases, in preference to all others. This conduct is not merely the most natural of all, but likewise the most reasonable and useful. Undoubtedly no one will be warranted in thinking that the remedy which he proposes, is the only one or the best—but when he has seen it succeed often—when he is apprized from the result of his own experience, of the indications which render it necessary, or the method of employing it, it is for him the best, and sometimes the only one in which he can place confidence.

We derive but an imperfect notion of diseases from descriptions or from books; and the accounts given in these latter of the effects of a remedy, convey to our mind ideas very incomplete, and even capable of leading us into error. Descriptions are rarely faithful and exact; and even were they so always, it is impossible to suppose that they could embrace all the minutiae, and present all the various shades of disease. Moreover, vague denominations introduced into their nomenclature, are calculated to throw confusion on their description. What do we understand by a putrid, malignant, or nervous fever? If, instead of adopting this method, a physician contents himself with describing phenomena, at the same time noting with attention the order of their succession, he will undoubtedly adopt one far preferable, and perform nearly all that is possible to be done, when the objects themselves cannot be brought within the immediate reach of the senses. Notwithstanding all this, however, these images will always remain destitute of physiognomy or spirit, because they are not sufficiently definite to produce durable impressions, and too uncertain to be substituted, in any way, for nature. It follows from this, that each physician may have his *materia medica*, and that this latter science should only be studied at the bed-side of the patient.\*

\* The rapid and general manner in which I examine this subject, prevents me  
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I do not believe it necessary to answer in this place, the scepticism, or even absolute incredulity of some physicians, nor to inquire into the causes and examine the motives on which they have grounded their disbelief. In all objects of from entering into a detail of practical proofs. I shall confine myself to the following remarks.

1st. Certain evacuations are salutary in certain particular cases, and these evacuations may be produced at pleasure, by means of certain substances. From this alone, I conclude that the art exists. Purging cures; rhubarb purges; consequently medicine is not an art of the imagination.

But I go further. In order to prove that medicine cannot be formed into an art, it would first be necessary to demonstrate that all those substances that act on the living body, produce on it effects uniformly the same—and can only affect it in one manner. No sooner do I discover that different effects either of a salutary or deleterious nature are produced by certain aliments or drink, than I deduce from my observations, principles by which I am to regulate the employment of these substances; and I have recourse to these rules for the purpose of preserving health or curing disease—medicine therefore exists for me—it exists as a true art.

2d. The rules of prognostics have been carried to a high degree of certainty—which not only proves the great uniformity existing in the laws of nature, but likewise the connection of visible symptoms, with those hidden movements, which have already taken place, or are merely preparing themselves. On the other hand, the action of the principal remedies cannot be doubted: no one has pushed scepticism so far as to assert that a purgative does not purge, or that an emetic does not excite vomiting. Now, if we can prognostigate favourable and unfavourable crises, and if remedies or regimen can favour the former, and prevent the latter, (which results from these well known effects,) are not these solid foundations for the medical art?

3d. By art many diseases are cured, which nature when left to herself is never, or at least seldom, adequate to remove. Such for example are malignant intermittent fevers, dropsies depending on deep obstructions in the abdominal viscera, &c. &c. In the generality of cases that are curable by nature, the art is able to impart to her more certain and rapid movements. To a knowledge of these facts we are not led by any hypothetical reasoning—but by observations, and experience, devested of all prejudice.

4th. In vain might it be objected, that nature alone causes all diseases—since in respect to some of the most violent the assertion is incorrect, as is shown in those accidents caused by poisons, the characteristic nature of which is precisely that of being placed beyond the influence of the vital energies. Nature only cures in peculiar circumstances, and under certain conditions—whereas by art we are enabled to change the former and to fulfill the latter.

“ He who maintains that diseases are cured of themselves, is guilty of an erroneous idea, or rather does not know what he wishes to say. Nothing is accomplished

discussion, individual opinions should in general be disregarded; and as to myself, I candidly declare that I recognize in them the existence of no other authority than the very nature of the things, or in other words, of reason, by which we are led to the examination of their laws. In the minds of those who allow themselves to be imposed upon by human judgments, the greatest of all absurdities can, with facility be converted into the most correct principle, and undeniable truth; and, the greatest and most fruitful truth may be held as the most dangerous and culpable error. If therefore we are desirous of knowing in what light medicine should be viewed, let us devest our memories of the opinions entertained by others, and search, examine, and discuss for ourselves. The results to which we are led by a judicious employment of our reasoning faculties, are not in the least invalidated by the opinions of the most intelligent minds themselves —This sentiment is not a vain presumption, but a just confidence in nature; and in the instrument which she has given us in order to elucidate and direct all our researches. If we reason erroneously, we are in the wrong—but if, on the other hand, we reason correctly, it is not necessary in order to bear the stamp of certainty, that our results should be in accordance with those deduced by others.

I shall consequently be content with remarking that, among those physicians who deprecate the utility of the art, we cannot discover one respectable practitioner, that they are for the most part, either speculators devoted to the exact science—often strangers to all practice, or else men void of judgment, in whom a constant want of success, has necessarily caused in them aversion to it. These latter per of itself—all depends on causes or determining circumstances. This is not correct merely in respect to trifling and isolated facts, but likewise to the combination of numerous facts linked together. When a person speaks of spontaneous productions, he employs a word destitute of sense, or which expresses nothing real."

*Hippocrates.*

ceiving that their practice does not succeed, and appreciating the instability of its basis, do not imagine that a medical art can exist, the principles of which have some solidity, and its practice a beneficial influence—the former discovering in the art, none of that great precision or strict form which the mathematical sciences present, and which, according to them, constitute the sole criterion of truth, maintain that in the application of remedies\* we can never attain any possible degree of certainty—forgetting that each science possesses its peculiar proofs, and that if man were really in constant need of those proofs which they require, he would forever remain, in relation to the most common incidents of life, in a state of inaction and uncertainty. Nature, which constitutes our only guide, and the impulse of which we are forced to follow, (since all the objects on which we endeavour to act, are modified through the medium only of her laws, and, since like all other animated beings, we are ourselves under her immediate influence)—Nature, I say does not possess any of that exact precision—and seems to have reserved for herself, a certain degree of latitude,† in order that the movements which she creates, should possess that of active liberty, which though causing them to assume more vanity and present more grace, prevents them from ever departing from their natural order.

Absolute certainty in the full acceptation of the term, appertains exclusively to objects of pure speculation: in practice we must content ourselves with approximations more or less exact, and which on this account might be called *practical certainties*. With these we must rest satisfied, for

\* Pitcairn presents thus the problem: *Dato morbo, invenire remedium proportionatum* This solution is rendered impossible; only to the calculator, who wishes it to be mathematical and precise. Practical problems in the arts are not resolvable in this way. The instruments employed for this purpose are not susceptible of absolute precision; which renders them perhaps more appropriate to our nature and to that of the object to which they are applied.

† This latitude corresponds exactly with that which the art can acquire in practice, or rather it marks out the possible measure of the latter.

they are the only ones which nature permits us to attain, and are sufficient to mankind in order to insure its preservation and happiness. Had it been otherwise, man would not only have not undertaken any of those labours by which his pleasures are made to multiply, but would a long time since have been erased from the surface of the earth.

In medicine, every thing or nearly so, depending on *coup d'œil*, the acuteness of perception, and on an happy instinct—certainties are found to exist, in the sensations of the artist himself,\* rather than in the principles of the art. The man who has not himself seen the objects, cannot form any just estimate of the proofs which their observation furnish, and he who devotes to them little attention, can form but an imperfect or false idea of their value. From this we may easily judge of the reasons which have induced physicians purely geometric and speculative, as likewise some unsuccessful practitioners, to deny the utility of medicine.† These latter were placed in a situation precisely similar to that of those philosophers, who from only reading our writers, have thought themselves competent to pronounce on the most secret mysteries of nature. But nature has reserved for herself the exclusive privilege of unveiling them to true observers only.

It was formerly fashionable in Paris, to ridicule the science of medicine, and regard its power as altogether chimerical. This opinion had received the sanction of some

\* You can discover no measure, no weight, no form of calculation, to which you can refer your judgments in order to give them absolute certainty. In our art there exists no certainty, except in our sensations.—*Hippocrates*.

† With regard to myself, I here certify that I have often witnessed the utility of medicine, and am of opinion, that it can be rendered serviceable in almost all cases. There exist but few diseases truly incurable—the art is far from having reached that degree of perfection which it will attain—and physicians, too much influenced by routine, neglect all the employment of its resources. For this reason it is that all are not cured who might be so. But even in cases the most desperate, it is at least possible to palliate the disease, and relieve the patient, which should undoubtedly be regarded as something.

physicians of reputation, who perhaps imagined that by thus overthrowing their tutelary god, they would impart to others a favourable idea of the strength of their mind. Some literary men, who in the boldness of their views, had attacked all existing prejudices were the more anxious to promulgate this opinion, as they had by degrees accustomed themselves to mistake incredulity for philosophy. All those who were anxious to appear like these, above all superstition, thought it incumbent on them to repeat in society, the reasonings of Montaigne, the jests of Moliere, or the whims of J. J. Rousseau. It was customary to hear it repeated daily by those even who were not willing to acknowledge nature to possess any degree of foresight, or a regularity of plan, that it was necessary, in the cure of disease, to rely exclusively on her interference. Those who obstinately denied the existence of final causes, and considered human life as the effect of a succession of chances, or of the slow apprenticeship of each organ—thought it equally impossible to add any thing to these chances by means of philosophical combinations, or to introduce, by experiments founded on observations, any degree of perfection in this apprenticeship.

I shall not examine here whether on this subject, these men were consistent with themselves. But what a spectacle does not a physician offer to our view, who\* stigmatises his profession with the charge of quackery,—proclaiming the acquirements which it necessitates as a frivolous display, and regarding its duties as vain grimaces! Does he imagine he will inspire a great confidence in the rectitude of his mind, when this mind has not been disgusted with the study of an art, according to him totally fallacious? Can he hope to add dignity to his character, by openly acknowledging that

\* I hope I am understood to allude here to those only who continue the exercise of a profession, the principles and utility of which they disavow and deny. In respect to those physicians, who owing to the doubts they entertain renounce the practice of medicine, we cannot refuse to eulogize their probity, candour and delicacy.

he practices his art, notwithstanding a distrust in his powers, and in this manner abuses the credulity of men? Assuredly these are not his intentions. His only reason for acting in this way, is to attract their attention by means of singular opinions, and to impose on them by manifesting a contempt for their judgment. He wishes to appear above them by despising what they esteem, and thinks it possible to place himself above all circumstances, by affecting to be uninfluenced by the esprit de corps or by personal interest.

But the public know by experience, that many of these physicians have not in any way been the less ardent or dexterous in profiting by its caprice. And with regard to those whose souls are not closed against all sentiments of morality and humanity, have they never discovered that such maxims as they profess to advocate, tend to discourage the inquiring youth\* in the midst of his labours—disgust him with the duties which they necessitate, and dispose him to the grossest and most systematic and culpable empiricism? Do they not perceive that their jests afflict and even hurt a poor patient, by depriving him of his fondest hopes, and by pointing out to him, to his great sorrow, the limited share of confidence he must place on them, and on their anticipated assistance.

\* He who despises his art, whatever it be, can never become a great artist. In respect to medicine, more particularly, the studies which it requires are so diversified in their nature, so laborious, and often so disgusting, that it becomes absolutely necessary to inspire a degree of enthusiasm in those who devote themselves to their pursuit. Good practitioners are always found to be men entertaining the greatest confidence in the powers of medicine. This confidence is perhaps in some degree as much the cause as the effect of their success, and has alone been capable of affording them support in the progress of their labours. In this science incredulity can only give rise to idleness, and serve as a shield to ignorance.

## SECTION IX.

*Examination of the seventh objection.*

IN the minds of those who regard the six preceding objections as unanswerable, the last will appear altogether superfluous. Before entering into an examination of it, it is in the first place necessary to regard the former as being susceptible of refutation—and even before we attempt to solve it, we must suppose them completely solved. And in this hypothesis, the most favourable undoubtedly to the cause of medicine, how numerous the difficulties that still remain to be explained! or doubtful questions to be elucidated! For the principles of the art might be established on solid foundations; time, to use the expression of Bacon, might have slowly created them\* by incessant labour, the various links of the chain which they are intended to constitute, might have been joined together—all this I repeat might have been achieved, and yet still not prove sufficient. These principles acquire their greatest utility from their application; and if the preliminary studies that are necessary to the practice of medicine, are beyond the reach of common capacity—if by innumerable obstacles they are rendered unattainable to the greater number of men—if sources of almost inevitable error are constantly encountered in their pursuit—shall we not be forced to acknowledge that the art is essentially faulty, in that disproportion existing between its means, and the degree of capacity we possess, and in that inability under which we for the most part labour, of causing it to attain, in a convenient manner, the accomplishment of its object? Confessedly the difficulties by which it is prevented from acquiring its highest degree of real utility, presents to our minds a most

\* Medicina temporis partus. *Bac.*

afflictive spectacle! Where is the physician to be found, who accustomed to observation, will not unhesitatingly pronounce whether medicine is productive of benefit more than harm, or whether its total abandonment would prove advantageous or detrimental to mankind.\*

But the question should not be examined in this point of view.

The individual who suffers, seeks relief, not from the effect of reasoning, but from the invisible impulse of instinct. Hence arises that universal confidence in medicine, which, notwithstanding all that has been said to the contrary is greater, and more superstitious among the poor and ignorant than among men who from their circumstances in life, have been enabled to cultivate their minds—more among the savage tribes than civilized nations. Cities contain physicians, but the country has mountebanks, and the forests of India jugglers, who in order to excite all the credulous fibres of the human brain, unite to the quackery of their art, a number of religious impositions.

Every where men observe that the application of certain substances is productive, on the body, of great and salutary effects; and see that by virtue of these, dangerous disorders are cured, which, when abandoned to themselves, prove fatal.† Is this not sufficient to determine them, when afflict-

\* In those countries where medicine is taught and practised in a *proper* manner it will be found to possess a direct utility. In those where it is taught and practised *improperly*, it is discovered to be *indirectly* useful, as will be shown presently.

† In order to call in question the action of medicine, the most subtle reasonings are necessary, but these are beyond the capacity of simple and ignorant men. Under their eyes medicines produce sensible effects—change the condition of the patient, and restore him to health. Other patients presenting analogous symptoms, and not possessing or despising these means of cure, grow worse from day to day, and die slowly or suddenly. Hence arises that confidence in medicine, existing among the lower classes of society, who for the most part, are guided by simple and direct reasonings, derived from striking data. This manner of proceeding, offers perhaps a narrow field for the exercise of the imagination, but is undoubtedly the surest as well as the most easy. Fanciful and subtle minds in abandoning the

ed with sickness, to seek the assistance of those persons who know how to employ these remedies, and to create in them hope that with their aid they will be enabled to recover life and health. This hope which leads them towards curers of all sorts, is not the result of reflection; but must be regarded as a true want, inseparably connected with our existence, and with all our other wants. In vain would we attempt to attack this tendency; although medicine were overthrown, it could not be eradicated from the mind, and the destruction of the science would only tend to abandon a greater number of victims to the influence of audacious ignorance.

Here, however, I shall not pause. Since this disposition is so natural in us, and is intimately united to our primitive impulses, it consequently follows that it must be good in itself, and requires only to be well directed. In order to arrive at this object, it is, on the one hand, necessary that all true physicians should, by uniting their labours, endeavour to improve the science; whilst, on the other, public authority, by virtue of a wise police, should preserve the people from their own errors; for this object is among the small number of those which should not be abandoned to an unrestrained liberty. If therefore it be absolutely necessary either to confide human life to men educated in our schools, or deliver it up to all the dangerous practices of jugglers or old women, is it not preferable to rest contented with the former. And would we not be acting in accordance to the precepts of a false and dangerous philosophy, were we to resign ourselves into the hands of these wretched competitors.

Who is not already sufficiently acquainted with the common method of observation, are from this necessarily exposed to fall into error. There are many absurd opinions of which intelligent minds are alone susceptible. The most sublime object of philosophy is to restore us to common sense; now common sense is the result of precise and distinct sensations, and rejects all that opposes, and is not in direct connection with these latter. Our nature requires that we should consider objects in mass—judge of them by their general results and seize them, in some sort by their *tout ensemble*.

tal agitations, the weakness and the credulity of patients? Who that does not know the presumptuous assurance with which every one advises a remedy, although he does not understand either the disease or the remedy itself? We have all seen some of those unfortunate persons, who, placed alternately into the hands of friends, acquaintances, and neighbours of both sexes, have had their diseases rendered mortal, which rest and low diet would have readily cured, merely because they have not possessed sufficient strength of mind to resist entreaties, threats, promises, but more especially the recital of those wonderful cures by which the proposed remedy is in all cases enveloped. Now, no one can rest assured that on all occasions he will be possessed of this requisite strength? In those moments when the equilibrium existing between the functions of the various organs of the body is destroyed, the judgment cannot be supposed to retain its own. Together with the vital phenomena, and from the same causes, the mind loses its energy; it in some cases wanders completely a long time before the abolition of, or even before any evident alteration in the former. A very slight disease is sometimes sufficient to render the most sensible man incapable of reasoning, and when delirium ensues, he becomes weaker than a child. In the former instance, those by whom he is surrounded, *force* him to wish, in the latter *they* wish for him. With the aggravation and danger of the symptoms, advice becomes more tumultuous, precipitate and uncertain—in proportion as the means of cure require prudence in their application, so they are accumulated, and void of order and precision. In order to save the patient from this multiplicity of blind, wavering, and contradictory advice, it is necessary that some one should possess a sufficient degree of authority to gain his confidence, inspire surrounding persons with fear—confound, by an ascendancy of learning, all ignorant minds, and introduce in the mode of treatment a spirit of method and unity; it is

necessary that only one should give directions, so that the command may not be assumed at the same time, by every one. This is the true part the physician has to perform, and which can only be expected from him, so that if he does but little good, he is instrumental in preventing a great deal of mischief; and even were he himself to cause some harm, he prevents still more from being done. The correctness of these remarks will, I believe, be acknowledged by all, whether friends or enemies to the science of medicine.

Notwithstanding, therefore, the almost universal defects observed to exist in the mode of teaching medicine—the imperfection of the practice, which I have not attempted to disguise, and the innumerable obstacles which impede its progress, sensible minds are forced, after an impartial examination, to discover, even under circumstances the least favourable to its cause, its real degree of utility. Far from being, as asserted by some exaggerated minds, the scourge of humanity, the science of medicine is on the contrary to be regarded as its hope, its safeguard; and promises in future, to present it resources, which from day to day will acquire greater extension and more efficacy.

Indeed, from all the preceding observations it naturally follows, that medicine having, like all the other arts and sciences, its origin in nature, must, like them, possess indestructible bases, and those peculiar means by which it will attain its perfection. Arising from the wants of man, it was next extended and improved by time and observation. These latter have already thrown light on a number of subjects, which did not appear susceptible of improvement, and have submitted to analysis, many objects, which at first sight, it was thought would oppose all attempts to this effect. What limits can we with reason prescribe to discoveries on subjects placed before our eyes, the results of which interest us more particularly, and for attaining which it is only necessary that we should give a proper direction to our senses. Can any one

say "the human mind will progress thus far, and no farther." Undoubtedly the limit of its sensations is to be measured by the degree of perfection it is capable of attaining. But does any one exist who is well informed of the extent of this limit? Who knows to what degree the sensations themselves are susceptible of being perfected? All objects foreign from them, are involved in the most impenetrable obscurity, whilst, on the contrary, all the rest is susceptible of elucidation.

Our means of investigation are multiplied in proportion as we acquire learning: our hopes and our ambition may embrace, in some sort, unlimited space. And if those methods instrumental in assisting memory, are carried to any degree of perfection; if we are careful in deducing from the knowledge we progressively acquire, general results embracing all our observations, our acquirements will be extensive and sure, and moreover easy and precise in their application; we shall be enabled, when it is necessary, to call them into requisition, and in all instances employ them without effort. It is perhaps more especially in medicine, that these analytical classifications are found of greater utility, and of easier formation. Nature herself seems to direct us towards them, and in some instances almost without our participation. Instead therefore of resisting her impulses it becomes our duty to follow them with attention—to consult her with confidence and reflection, since she only desires eyes worthy of her, in order to unveil herself.

## SECTION X.

*Conclusion.*

I DARE make bold to predict that together with the true method of observation, the spirit of philosophy which should always predominate in it, will soon revive in medicine, and that the science will assume a different aspect. The various fragments of which it is now constituted, will be assembled, in order to frame with them a system, simple and fruitful as are all the laws of nature. After a faithful examination of all the facts, and after they have been verified and compared they will be linked together, and referred to a small number of principles, fixed or susceptible of little variation. The method of this investigation, of uniting them by their analogies or differences, of deducing from them general rules, which will in fact be but a more precise detail of them; this method, I repeat, will be carried to a higher degree of perfection. The more important and difficult art, that of applying these general rules to practice, will be simplified. From all this it will naturally follow that the physician will not be under the necessity of creating for himself, his method and means of cure; of forgetting what he has learned in the schools in order to seek in his own sensations, a knowledge of that which he would fail of acquiring from the sensations of others—I allude to descriptions not merely correct and minute, but constituting by union a whole, of which the different parts are well linked together. When this is attained it will not be necessary that talent should be incessantly substituted for the art—this latter on the contrary, will sometimes create, and even appear in some instances to be a substitute for the former. I am far from believing it possible however, that by the precisions of the art, we shall ever be enabled to supply the advantages of a sound judgment,\* or

\* The knowledge acquired in schools and books, can neither create nor improve the acuteness of the senses; the rules of poetry can never form a good poet, nor

the combination of a happy genius; but they will prevent the judgment from continuing to be misled by vague and incoherent images, and genius from being bound down to the most frivolous and fallacious rules; they will consequently in future, encounter no obstacles to their entire development. Slender minds will then perform with facility, what at the present period is attained with difficulty by the most intelligent—and the practice of medicine devested of that trash, by which it is now obscured, and reduced to indications simple, distinct, and methodical, will then acquire the degree of certainty at which, owing to the changeable nature of the objects on which it is exercised, it can reasonably be expected to arrive.

Meanwhile, notwithstanding the many serious and well founded reproaches that can be cast on medicine, and although there exist many physicians unworthy of that name; the public in placing them all on the same line, and in thus confounding learning and virtue with ignorance and empiricism, would be acting with the most manifest injustice. Than this nothing can appear more calculated to discourage talent, and disgrace an honest heart. Men of the world are anxious to advance their opinion on all subjects of conversation. No sooner are diseases or physicians mentioned before those of harmony a good musician. Talent is rarely found, and is never transferred. The true knowledge of our art, is constituted of a more or less correct assemblage of sensations derived from clinical observations—those sensations can only be furnished by the objects which produce them. Consequently from reading, we only learn what we already know. But when elementary books will be composed in a proper manner, they will teach the true method of observation; when they present facts in their proper light and combination, they will enable us to see objects more clearly, and to retrace more accurately in the mind the impression which these last have made on our senses. Such books will not cause the loss of the most precious moments, in engraving on the memory things which in time we are very happy to forget. They will, on the contrary, diminish and smooth all difficulties, and will serve to the young student the part of an intelligent teacher, who in order to impart to him the knowledge which he possesses, endeavours to place him in the same situations, and employ the same means, by which he has been enabled to acquire it.

fore them, than they wish to appear to understand the former, and judge of the latter; their treatment of this fever, they say, has been badly commenced; such a fault has been committed, such a method should have been adopted. This physician has killed his patient; had he administered such a remedy, this accident would not have occurred.

These most peremptory and unwarranted decisions, should be answered by the physician, by the smile of pity and contempt they so evidently deserve. So far from receiving, or supporting them, and thus encouraging in the public mind the opinion of their correctness, he should endeavour to demonstrate to those who propagate them, that in judging of things they do not comprehend, they themselves contribute to the degradation of their own understandings, and that by depreciating the merits of men they are not adequate to judge, they act contrary to the dictates of strict justice.

There exist but few persons capable of pronouncing with impartiality and accuracy on medical subjects. The acquirements necessary for this purpose, are to be found in physicians only, who but too often are disposed to profit by that spirit of bitter aspersion which is discovered to prevail in the circles of society; and moreover, anxious to improve all opportunities of depreciating the talents of their fellow practitioners. Consequently on the one hand, the public cannot with any degree of justice entertain, an opinion on this subject, whilst on the other, the opinion which *they* profess to entertain of each other may, in a great number of instances, be regarded as very suspicious. The former is incompetent to judge; the latter are not always free from prejudice.

Were we to content ourselves with determining, from the general method of reasoning of each practitioner, and from his conduct in the various transactions of life, what would be the degree of morality to be expected from him in the exercise of his art—if to these data we were to add those afforded by his success or misfortune, confidence would be less

blind, and critics more just. If the public are absolutely determined to judge of physicians, they should at least limit themselves to the performance of that duty. In respect to physicians individually, since in abandoning themselves to their mutual injustices, they are always under the influence of their passions, and acting without faith, what are the means best calculated to return them to a sense of reason and justice? An appeal to their conscience, and to the sentiment of their own personal dignity.

But let me repeat it, there are many to be found anxious to render homage to talent; there exist likewise some who add genius to vast acquirements, and eminent humanity,\* to that morality by which virtue is cultivated as an art, and duties made to be fulfilled, in a manner similar to that in which the wants are satisfied. If these latter are more seldom to be met with, it must be attributed as much perhaps to errors of opinion, as to defects in the organization of our schools, or in general education. It would suffice, in order to see them increase in number, to pay them the tribute of respect to which they are entitled. If I reclaim this tribute, it is much less in favour of them than of this same public, by whom they are so unceremoniously condemned. They have no need of this approbation, since they are well prepared to appreciate all its uncertainties. But to minds of a more undecided character, this degree of encouragement is necessary, since with its aid, they could be made to resemble the former. Recall to memory the difficult studies, and tedious labours to which they devote their attention! the endless sacrifices to which they are made subject during the course of their existence! and the important services which may be derived from them by indi-

\* During the whole course of this long war, (1792,) the health officers have given proofs of the most generous devotion to their country. They have served it, and defended the cause of liberty with a degree of zeal which, whilst it sheds lustre on the science, entitles them to the everlasting gratitude of their countrymen.

viduals, families, and society at large!\* It is not alone for having rescued many victims from death, or relieved them of their sufferings, that they are rendered commendable;

\* In insisting on the importance to be attached to the labours of the physician, I do not think myself actuated by that sentiment of selfishness, which often causes us to exaggerate to ourselves the importance of the object to which we have devoted our lives. In enumerating the services which might be rendered by a skilful, prudent and virtuous physician, it has been my principal object to show all the magnitude and importance of their duties, to such as engage in the practice of that profession. There does not exist perhaps in society an art the obligations of which are more various, delicate and imposing—in which it is more necessary to trace for ourselves, some invariable plan of conduct—to submit to the test of analysis, all the circumstances under which we may be placed—to direct all our inquiries in virtue of some general principles to which all details may be referred. I would beg indulgence for a few reflections on this subject.

Viewed in a certain light, the medical profession may be regarded as a kind of sacerdotal function; under another, as a true magistracy. As the object of a physician's labours is one of no little importance, namely, human life; it naturally follows that his obligations to disclose all useful truths—to prevail none, and to give to his mind, all the perfection of which it is susceptible, becomes of so sacred a nature, that the least violation, forgetfulness, or negligence on either of these points, presents invariably something truly criminal.

The duties of the physician, may be examined according as they relate to the science, to his patients, or to society at large.

The physician is in duty bound to the science, or in other words, to humanity, (for the service of man is constantly its most important object) to acquire in the collateral sciences, a knowledge of all those subjects which may have some relation to our art, and may without the aid of hypothesis be transferred into it; and likewise to search in the art itself all that is capable of furnishing light to the other sciences, but more particularly to those from which it receives support. To him the love of truth must be, not only a propensity, or habit, but a passion; it must possess all the activity, solicitude and scruples of a true passion. If the virtuous physician cannot conscientiously disguise or conceal the truth he imagines he has discovered, still less must he neglect the study of those means, by which he is enabled to arrive at the discovery.

His patients are assuredly entitled to all his attention and consolations. The art of administering medicine is nothing—he must be able to cure, for which purpose it is of absolute necessity that he should be acquainted not only with the various effects of moral impressions, but with those produced by remedies or aliments. He must be versed in all the secrets of the heart, and be enabled to excite, when necessary, all its sensitive fibres. Look attentively at those physicians most successful in their practice, and you will discover them in almost every instance to be men skilful

but by being made the guardians of those interests the most dear to the human heart—the anxieties of a husband, of a wife, of a son, of a father, or of a tender friend; the in managing and directing in some sort at will, the human soul—in reviving hope—in changing to calmness the various agitations of the mind.

In order to employ with success, the influence of the passions in the treatment of diseases, it is absolutely necessary to possess precise notions of the relation and reciprocal action of these two kinds of affections. It is not less important to understand the language of the former, and the art of exciting or moderating them, than to be acquainted with the signs of the latter, and the means calculated to modify their symptoms and their course. In order therefore to cause every thing which surrounds a patient to contribute to the success of the treatment—to inspire those persons by whom he is surrounded with those sentiments most proper for accelerating his cure—in a word, to know on all occasions what it is proper to say, as well as to do, the physician must unite to great sagacity, a considerable portion of prudence and judgment.

The duties imposed upon him by society at large, are a free and generous communication of all his discoveries—a wise and patriotic employment of his talents, and of all the influential means which his profession affords him. By penetrating into the interior of souls, and associating himself, through the medium of the confidence which he inspires, with the thoughts and feelings of families, how many serious prejudices is he not enabled to oppose? and how numerous the useful truths he can disseminate? The influence he professes, which, from the very nature of his functions, is at times productive of general and most extensive effects—it becomes sometimes a true public power.

In the actual state of things, a physician is capable of rendering numerous and very diversified services to society: each of these services however, does not constitute a particular order of duties—they may all be referred to some general head.

Artaxerxes entreats Hippocrates to come to Persia, for the purpose of aiding with his science, that country then desolated by a most fatal plague. In order to tempt his ambition, and flatter his vanity, he offers him riches, together with the highest honours. To this Hippocrates answers “I have at home food, clothing and covering, I wish for no more—I shall not go to serve the enemies of my country and of liberty.” In him we behold the great citizen, the true friend of humanity, who by this simple refusal, serves his country as effectually as did Miltiades and Themistocles by their brilliant victories, and the remembrance of which has contributed more than is supposed to the emancipation of nations.

My beloved preceptor, the respectable Dubrueil, by whose premature death science has been deprived of one who contributed daily to its advancement, humanity of one of its greatest lovers, and friendship of its brightest ornament—Dubrueil had gone to Pezenas, in order to spend a few months with his father in medicine

fate of those unhappy persons, who fear to survive the loss of the objects of their love—of those family secrets intrusted to their prudence and faithful confidence—finally,

the celebrated Venel. Whilst in the midst of the most attracting conversations on the sweet impressions of nature, and the delights of spring, he is informed that in his country (the province of Rouergue,) an epidemical disease has developed itself, attended with the most violent symptoms—carbuncles, buboes; in fact, a true pestilential fever. He flies—throws himself in the midst of the contagion, in order to aid his countrymen with the succours of his charities and of his premature talents. In him we discover the virtuous physician, the devoted citizen.

Such signal opportunities, however, of serving our country, fortunately seldom present themselves—they will become of still more rare occurrence, in proportion as police, hygiene, and in general the art of life will advance towards perfection. But, as we have already mentioned, there are some ordinary circumstances, in which the physician fulfilling as it were the functions of a magistrate, is enabled by means of the influence he derives from the confidence of his patients, and his intimacy in families, to contribute to the advancement of laws, morality, and reason. Assuredly the greatest benefit that can be conferred on men, is to disseminate among them reasonable opinions, and to inspire them with generous sentiments. This Apostleship of good sense and virtue, is a sacred duty in all who feel and think, but more particularly in those persons whose opinions can with facility acquire a degree of preponderance.

In general Physicians are, more than other men, divested of all prejudices. Accustomed as they are to the investigation of nature, they discover the fundamental principle of many things—entertain a profound contempt for the reveries of indolent and restless imaginations—and great disdain for those numerous established follies, through the influence of which the world is governed. Now, it is impossible to imagine that boldness in mind, will not sooner or later communicate a degree of independence to the character. Consequently we find that those physicians who deserve a place in our recollection, have been not only truly wise, but the most sincere friends of liberty—appreciating in a courageous and calm manner, all that tends to create terror or inspire admiration in the minds of other men. These fatal errors, which not only degrade the mind, but likewise corrupt the soul, have at all times met, in the sagacity and energy of those physicians, enemies so much the more dangerous, as their arguments against quacks of all sorts, are substantiated by physical facts; and as in order to diminish their force, it would first be necessary to annihilate these facts. Let physicians persevere in the pursuit and fulfilment of this respectable task—may they become the guardians of public morality, as they already are of public health; finally, may all liberal and philanthropic governments find in the zealous defenders of truth and morals, whose voices disseminating each day in the bosom of families knowledge and consolations, will contribute to the advancement of reason, of true virtue, and consequently of happiness.

of peace and hope, which, when unable to do more, they distil into the soul of the unfortunate. For such is the charm of a beneficent, and courageous virtue, that in order to afford assistance to one in misfortune, it is not essentially necessary that it should bring succours to him—its voice alone will be sufficient to pour the sweet balm of consolation in the deepest wounds.

But let me repeat it, in proportion as they are deserving of public gratitude, the more they can dispense with it; in doing all that is necessary for obtaining it, they establish the foundation of their happiness on the most solid basis. And, were I permitted, I would even maintain that they should accustom themselves to disregard it, since it often becomes their duty to defy the opinion which grants it. Others, not being competent to judge their physicians, these should learn to judge themselves. Not being subject to the inspection of the law, or placed under the eye of the public, they should constantly be watched by their own conscience—they should form for themselves an internal existence, indifferent to all unjust censure, or vain applause.

Physicians love their fellow creatures, and are anxious to serve them, but so far from revolting at their ingratitude, they discover in it sources of pleasure unknown to the vulgar. For a consciousness that it cannot diminish their beneficent intentions, nor extinguish in their hearts the sweetest emotions of humanity, is undoubtedly a pleasure infinitely greater than that procured by the manifestation of gratitude.

In their minds, as in those of legislators, there exist but *men*; to them the life of the powerful or rich is not more precious than that of the weak and poor. The few exceptions which they sometimes make to this general rule, are only in favour of those great benefactors of their country,—the learned by which it is enlightened, and the great artists who spread lustre upon it. If in some instances they think

it pardonable to refuse their assistance to any one, it is only to public malefactors,\* against whom the vengeance of society is not always sufficiently powerful. Not satisfied with doing good themselves, they exert all the influence of their ministry, to inspire a love of it in others, and not content with being endowed themselves with the true principles of wisdom, they endeavour through the medium of the intimacy in which they are received, to extend all useful truths. When it becomes their duty to face hatred, dangers, contagion, and death, they do not hesitate to do so. On beholding them entering a city desolated with the plague, or inhaling the deleterious effluvia of a malignant fever, you perhaps pity them! Ah! if so, it is assuredly yourself who must be pitied, since you are not sensible that this devotedness carries along with it its own reward—that the condition of the soul, which in all instances accompanies it, is attended with feelings the most agreeable and noble in their nature!

Finally, at the approach of that moment, when they are compelled to pay to nature the inevitable tribute, which they have so often witnessed in others, they recall to their minds their past conduct,—behold in it nothing but what serves to fill their hearts with sentiments of the purest contentment—and their last words are employed in offering thanks to the eternal Disposer of life and death, and the expressing that security which unstained virtue inspires.

Such in former times was the great Hippocrates—such at the end of the last century, was the wise and good Sydenham—such were in our days, Van Swieten, Dehaen, Pringle, Morgagni, Rosenstein, Atoine Petit, Ribeiro Sanche, Dubrueil, &c. &c. whose labours have been of service to humanity, whose names constitute the glory of the art, and whose examples offered as a subject of emulation to the ris-

\* In the preceding note, we beheld the conduct pursued by Hippocrates, whose talents and succours the enemies of Greece and liberty had implored.

ing generation, will serve to form, from age to age, men worthy of becoming their successors.\*

\* The question, the principal arguments of which we have been examining, could be laid down in a more general and brief manner, as follows:

1st. Do the phenomena of health and disease—the effects of aliments, remedies, and all substances capable of modifying the state of the living body, observe a regular order of succession.

2d. Can this order be subjected to observation?

3d. Or in other words, can we lay down any certain and fixed principles, on the manner in which these phenomena or effects are produced?

4th. Can we establish some corresponding principles, relative to the manner of producing, anticipating, or removing them by art?

It will be perceived that each part of these questions carries, in some sort, along with it its proper answer.

But of this general exposition, as well as of every other of the same kind, no precise idea can be formed, until after having traced up the whole series of particular propositions, which it contains and presents in a summary manner.

P. S. On the remark of a very intelligent friend, I think it necessary to add in this place, that although not admitting any mathematical precision in the estimate of certainties relative to the common objects of life, I am very far from wishing to deny the advantage which the general method of reasoning derives from more attentive study of the science of calculation. I am perfectly aware that algebra has been employed with apparent success, by men of superior talents for the purpose of forming an estimate of the probabilities, not only of those opinions, which from the multiplicity and mobility of their data, cannot be reduced to any precise rule; but also of the greater number of eventful circumstances, and even of those that are founded on the still more inconstant and changeable passions of the human heart. These two methods, the one founded on the rules of calculation, the other on the principles of true metaphysics, offer to each other, reciprocal assistance. Advancing together, they have already made some progress, which cannot, except to inattentive minds, have remained unobserved; and every thing seems to point out that they will soon attain a higher degree of perfection. It must moreover be acknowledged that many parts of physicks as applied to the living system, such for example as the appreciation of muscular strength, the theory of vision, and perhaps of hearing, do not appear susceptible of satisfactory explanation, without the aid of mathematics. True geometers, however, are those who appreciate the most correctly, the impossibility of applying the science of calculation to the investigation of every subject, and it is likewise a truth that the various applications of it, which to this day, have been made to the healing art, so far from promoting its advancement, have only served to introduce into it, the most erroneous theories and dangerous plans of treatment.

